MODEL



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Please Note:

The following information is provided in the interests of safety.

- 1). This equipment is mains powered (230 Volts AC) and is therefore potentially hazardous once the cover is removed.
- 2). Only trained engineering staff should attempt any work on the unit with the cover removed.
- 3). While servicing the unit, protect the mains supply to the equipment under test and all electrically powered test equipment with a suitably rated Residual Current Circuit Breaker (rccb) unit. These devices are readily available and are designed to remove the mains supply quickly in the event of a serious leakage of current to earth.
- 4). Ensure all test equipment, and the unit under test is adequately earthed.
- 5). Always discharge the CRT before attempting any work on the high voltage power circuits.
- 6). We advise the use of Electrostatic Damage Prevention equipment when servicing electronic equipment containing static sensitive devices.

SAFETY NOTICE

This service manual is prepared to assist engineers or technicians of repair centers who are in charge of servicing the monitors in the field. The service manual, therefore, is not for users but for those technically oriented service engineers from repair centers who are capable of servicing the unit.

This service manual explains the monitor's outline, detailed features, functions and basic construction of the individual unit or circuit, alignment procedure and the detailed TROUBLE-SHOOTING procedures.

The contents should be read and completely understood before attempting service.

- 1) Make sure the power cord is disconnected before opening the BACK-COVER of the monitor and replacing any parts in the unit.
- 2) While the monitor is in operation, do not attempt to connect or disconnect any wire.
- 3) When the power is on, do not attempt to short any portion of the circuit. This shorting may cause damage to the transistors, ic's or other parts in the unit.
- 4) Operation of the monitor with the cabinet or the BACK-COVER removed involves a shock hazard. The repair or service work on these models should only be performed by those who are thoroughly familiar with the precautions necessary when working on high voltage equipment.
- 5) Do not install, remove, or handle the picture tube in any manner unless shatterproof goggles are worn. People not so equipped shoule be kept away while picture tubes are handled. keep the picture tube away from the body while handling, & donot lift the picture tube by the neck.
- 6) When replacing a chassis in the monitor, all the protective devices must be put back in place, such as, barriers, NON-METALLIC KNOBS, adjustment and compartment shields, and isolation RESISTOR-CAPACITOR, ETC.
- 7) When service is required, observe the original lead dress extra precaution should be taken to ensure correct lead dress in the high voltage circuitry area.
- 8) Always use the manufacturer's replacement parts. Especially critical parts as indicated on the circuit diagram should not be replaced by other manufacturer's. parts furthermore, where a short circuit has occurred, also replace those parts that indicate evidence of overheating.
- 9) Before returning a serviced monitor to the customer, the service technician must throughtly test the unit to be sure that it is completely safe to operate without danger of electrical shock, and must ensure that no protective device built into the monitor by the manufacturer has become defective, or inadvertently defeated during servicing. Especially, the resistance of the connection between the protective earthing terminal and the parts required to be earth shall not exceed 0.1 ohm.

FINAL ALIGNMENT PROCEDURE

THIS ALIGNMENT PROCEDURE IS USED TO ADJUST / TEST THE PICTURE PERFORMANCE IN ORDER TO OBTAIN OPTIMUM CONDITIONS THE FOLLOWING SEQUENCE MUST BE FOLLOWED.

- WARM UP FOR 30 MINUTES BEFORE PERFORMING EVERY TEST AND ALIGNMENT, CRT FACES TO EAST, ROOM BRIGHTNESS IS TO BE AT 500 LUX.
 MAKE SURE THE ANALOG SIGNAL LEVEL IS AT 0.7 Vp-p AND THEN INPUT
 THE SIGNAL.
- THE FOLLOWING IS THE INITIAL SET UP BEFORE THE AUTO ALIGNMENT.

(a) PRE-CHECK AND ADJUSTMENT

- 1. ADJUSTMENT OF THE HIGH VOLTAGE:
 a. INPUT 64KHZ 1028x1024 CROSS HATCH PATTERN, PRESS "6500" BUTTON OF THE FRONT CONTROL MEMBRANE SWITCH ONCE.
 - b. SET BOTH CONTRAST AND BRIGHTNESS LEVEL TO MAXIMUM. VERIFY IF THE HIGH VOLTAGE READS 26KV +/- 0.3KV, OTHERWISE ADJUST VRP1.
- 2. G1 VOLTAGE SET-UP :
 - a. INPUT 64KHZ 1028x1024 CROSS HATCH PATTERN.
 - b. SET BOTH CONTRAST AND BRIGHTNESS LEVEL TO MAXIMUM. VERIFY IF THE G1 VOLTAGE READS -55V +/- 0.5V, OTHERWISE ADJUST VR305.
- 3. X-RAY CHECK:
 - a. INPUT 64KHZ 1028x1024 CROSS HATCH PATTERN.
 - b. PARALLEL ON 27KR RESISTOR TO R325. THE SCREEN DISPLAY SHALL BE DISAPPEAR.
 - C. POWRE OFF THE U.U.T AND REMOVE 27KR RESISTOR.
 - d. POWER ON THE U.U.T AGAIN. THE U.U.T SCREEN SHALL BE DISPLAY.
- 4. A.C.L. CIRCUIT SET-UP:
 a. INPUT 64KHZ 1028x1024 FULL WHITE PATTERN.
 - ADJUST VR304, THE SCREEN DISPLAY SHALL BE CHANGED. THEN TURNING VR304 COUNTERCLOOCKWISE UNTIL IT REACHES THE END.
- 5. POWER SAVING VERIFICATION: a. INPUT 64KHZ 1028*1024 TIMING.
 - SWITCH OFF H-SYNC SIGNAL FROM THE SIGNAL INTERFACE BOX. THE POWER INDICATOR LED SHALL CHANGE THE EMITTING COLOR FROM GREEN TO ORANGE. SWITCH ON THE H-SYNC SIGNAL AGAIN.
 - C. SWITCH OFF V-SYNC SIGNAL. THE LED SHALL CHANGE THE EMITTING COLOR FROM GREEN TO ORANGE. SWITCH ON THE V-SYNC SIGNAL AGAIN.
 - SWITCH OFF BOTH H AND V SYNC SIGNALS. THE LED SHALL CHANGE THE EMITTING COLOR FROM GREEN TO ORANGE.SWITCH ON BOTH H AND V SYNC SIGNALS AGAIN.
- (b) WHITE BALANCE AND BRIGHTNESS ADJUSTMENT: (FOR WHITE BALANCE MANUAL ADJUST USE ONLY)
- CONNECT SIGNAL I/O CABLE FROM U.U.T TO SIGNAL INTERFACE BOX.POWER ON THE U.U.T.
- 2. CONNECT I2C BUS CABLE FROM PC-COMPUTER TO I2C CONNECTOR P809 OF THE D.M.C DAUGHTER BOARD OF THE U.U.T.
- 3. FIRMWARE DOWNLOAD: (FOR FIRMWARE UPDATE ONLY)
 a. PRESS "F2" COMMAND KEY FROM THE KEYBOARD ONCE AND WAIT UNTIL THE "LOADING" DECAL DISAPPEARS FROM THE SCREEN.
 - b. PRESS "ENTER" KEY TWICE AND WAIT UNTIL THE MAIN ALIGNMENT MENT POPS UP ON THE SYSTEM SCREEN.
 - C. RECYCLE THE POWER ON/OFF SWITCH OF THE U.U.T TO WRITE DATA TO EEPROM.

- 4. RASTER CENTERING ADJUSTMENT: (FOR RASTER IS NOT IN THE CENTER OF THE BEZEL ONLY)
 - a. PRESS "CTRL" AND "F1" COMMAND KEYS SIMULTANEOUSLY. IF THE FIRMWARE REVISION OF THE U.U.T IS CORRECT, VDY4 WAVEFORM WILL POP UP ON THE SYSTEM SCREEN. OTHERWISE, A "WRONG FIRMWARE" DECAL WILL POP UP INSTEAD.
 - b. UTILIZE "INSERT"(+1), "DELETE"(-1), "HOME"(+5), AND "END"(-5) KEYS TO ALIGN THE RASTER IN THE HORIZONTAL DIRECTION.
 - c.PRESS "F8" COMMAND KEY ONCE TO SAVE THE CHANGE.
 - d.PREES "8" NUMBERICAL KEY_ONCE AND REPEAT THE ABOVE STEPS TO ALIGN THE RASTER IN THE VERTICAL DIRECTION.
 - e.PRESS "F8" COMMAND KEY ONCE TO SAVE THE CHANGE.
 - f.PRESS "ESC" COMMAND KEY ONCE TO RETURN TO THE MAIN MENU.
- 5. USE DEGAUSSING COIL TO DEMAGNETIZE THE C.R.T FACE OF THE U.U.T.
- 6. VST1--VST8 SET-UP:
 VST7,8 VOLTAGE HI(FF), VST4,5,6 VOLTAGE IS 1V (MEANS R,G,B DC VALUE SET UP); VST 1,2,3 VOLTAGE IS 2V (MEANS R,G,B GAIN SET UP)
- 7. B GUN CATHODE AMPLITUDE
 INPUT 64KHZ 1028x1024, COLOR GREY LEVEL PATTERN.
 ADJUST THE EXT. BRI. KEY TO MIN.; THEN ADJUST THE EXT. CONTRAST
 KEY TO MAX.
 ADJUST VR303 UNTIL THE AMPLITUDE IS AT 38 Vp-p.
- 8. BRIGHTNESS OF RASTER SET-UP: ADJUST THE EXT. BRI.KEY TO MAX.; AND ADJUST THE SCREEN VR UNTIL GET THE RASTER BRIGHTNESS IS APP. 1FL.
- 9. 6500 k WHITE BALANCE ADJUSTMENT:
 HIGH/LOW BRIGHTNESS COLOR TEMPERATURE ALIGNMENT:
 a. LOAD VST1--6 VALUE.
 - b. INPUT 60KHZ 1028x1024, 2" SQUARE PATTERN. ADJUST VST7 UNTIL THE RASTER BRIGHTNESS IS APP. 0.08 FL. ADJUST VST8 UNTIL 2" SQUARE BRIGHTNESS IS AT 2 FL. ADJUST VST4,5 UNTIL x = 0.313 ± 0.01, y = 0.329 ± 0.01.
 - c. ADJUST VST7 UNTIL THE RASTER BRIGHTNESS IS AT 0.08 FL. ADJUST VST8 TO MAX. ADJUST VST1,2 UNTIL x = 0.313 \pm 0.01, y = 0.329 \pm 0.01.
 - d. REPEAT THE ALIGNMENT ACCORDING TO b & c PROCEDURE, UNTIL THE PICTURE BRIGHTNESS $x=0.313\pm0.01,\ y=0.329\pm0.01.$
- 10. 9300k WHITE BALANCE ADJUSTMENT:
 HIGH/LOW BRIGHTNESS COLOR TEMPERATURE ALIGNMENT:
 a. LOAD VST1--6 VALUE.
 - b. INPUT 64KHZ 1028x1024, 2" SQUARE PATTERN. ADJUST VST7 UNTIL THE RASTER BRIGHTNESS IS APP. 0.08 FL. ADJUST VST8 UNTIL 2" SQUARE BRIGHTNESS IS AT 2 FL. ADJUST VST4,6 UNTIL x = 0.281 ± 0.01, y = 0.311 ± 0.01.
 - c. ADJUST VST7 UNTIL THE RASTER BRIGHTNESS IS AT 0.08 FL. ADJUST VST8 TO MAX. ADJUST VST1,3 UNTIL x = 0.283 \pm 0.01, y = 0.298 \pm 0.01.
 - d. REPEAT THE ALIGNMENT ACCORDING TO b & c PROCEDURE, UNTIL THE PICTURE BRIGHTNESS $x=0.283\pm0.01,\ y=0.298\pm0.01.$
- 11. MAIN TIMING (64KHZ 1028×1024) PERFORMANCE ALIGNMENT.
 a. RASTER CENTERING: ADJUST VDY4(H-DC), VDY8(V-DC), UNTIL THE RASCER IS AT THE CENTER OF THE BEZEL.
 - b. V-PHASE: PLACE THE VERTICAL PICTURE IN THE CENTER OF THE RASTER.
 - c. V-SIZE: MAKE THE VERTICAL HEIGHT APP. 230mm.
 - d. PINCUSHION GAIN: MAKE THE PICTURE TO BE A STRAIGHT LINE.

- e. H-PHASE: CENTER THE PICTURE ON THE BEZEL, $| L-R | \leq 2 \text{ mm}$.
- f. H-SIZE: MAKE THE HORIZONTAL WIDTH 287 ± 3 mm.
- PINCUSHION PHASE/BALANCE/WAVEFORM: PINCUSHION DISTORTION, MAKE THE PICTURE, H \leq 1.5 mm.
- h. V-LINEARITY: ADJUST VDY1 UNTIL THE VERTICAL LINE IS LESS THAN 7.5%
- i. V-SIZE: MAKE THE VERTICAL HEIGHT 230 ± 3 mm.
- 12. BRIGHTNESS ADJUSTMENT:
 a. INPUT 64KHZ 1028x1024, NO VIDEO INPUT.
 - b. PRESS "6500" BUTTON OF THE CONTROL MEMBRANE SWITCH ONCE
 - C. ADJUST THE EXT. "BRIGHTNESS" KEY AND "CONTRAST" KEY TO MAX. THEN ADJUST THE SCREEN VR ON THE FBT OF THE U.U.T TO MAKE THE ANALYZER READS BETWEEN 0.9-1.5 FL.
 - d. ADJUST THE EXT. "BRIGHTNESS" KEY UNTIL, SET-UP THE RASTER BRIGHTNESS IS 0.08 FL.
 - e. INPUT 2" SQUARE PATTERN, ADJUST EXT. "CONTRAST" KEY TO MAX. THEN ADJUST VR303 UNTIL TO MAKE THE DISPLAY CENTER BRIGHTNESS IS 45 FL ± 1 FL.
 - f. INPUT FULL WHITE PATTERN, ADJUST EXT. "CONTRAST" KEY TO MAX. THEN ADJUST VR304 UNTIL TO MAKE THE DISPLAY CENTER BRIGHTNESS IS 29 FL ± 1 FL.
- (c) WHITE BALANCE AND BRIGHTNESS ADJUSTMENT: (FOR WHITE BALANCE AUTO-ADJUST USE ONLY)
- 1. CONNECT SIGNAL I/O CABLE FROM U.U.T TO SIGNAL INTERFACE BOX.POWER ON
- 2. CONNECT I2C BUS CABLE FROM PC-COMPUTER TO I2C CONNECTOR P809 ON THE D.M.C DAUGHTER BOARD OF THE U.U.T.
- 3. FIRMWARE DOWNLOAD: (FOR FIRMWARE UPDATE ONLY)
 a. PRESS "F2" COMMAND KEY FROM THE KEYBOARD ONCE AND WAIT UNTIL THE "LOADING" DECAL DISAPPEARS FROM THE SCREEN.
 - b. PRESS "ENTER" KEY TWICE AND WAIT UNTIL THE MAIN ALIGNMENT MENU POPS UP ON THE SYSTEM SCREEN.
 - c. RECYCLE THE POWER ON/OFF SWITCH OF THE U.U.T TO WRITE DATA TO EEPROM.
- 4. RASTER CENTERING ADJUSTMENT: (FOR RASTER IS NOT IN THE CENTER OF THE BEZEL ONLY)
- a. PRESS "CTRL" AND "F1" COMMAND KEYS SIMULTANEOUSLY. IF THE FIRMWARE REVISION OF THE U.U.T IS CORRECT, VDY4 WAVEFORM WILL POP UP ON THE SYSTEM SCREEN. OTHERWISE, A "WRONG FIRMWARE" DECAL WILL POP UP INSTEAD.
- b. UTILIZE "INSERT"(+1), "DELETE"(-1), "HOME"(+5), AND "END"(-5) KEYS TO ALIGN THE RASTER IN THE HORIZONTAL DIRECTION.
- C. PRESS "F8" COMMAND KEY ONCE TO SAVE THE CHANGE.
- PREES "8" NUMBERICAL KEY ONCE AND REPEAT THE ABOVE STEPS TO ALCON THE RASTER IN THE VERTICAL DIRECTION.
- e. PRESS "F8" COMMAND KEY ONCE TO SAVE THE CHANGE.
- f. PRESS "ESC" COMMAND KEY ONCE TO RETURN TO THE MAIN MENU.
- 5. USE DEGAUSSING COIL TO DEMAGNETIZE THE C.R.T FACE OF THE U.U.T.
- 6. WHITE BALANCE ADJUSTMENT:
 a. HOOK MINOLTA COLOR ANALYZER'S PROBE ON TO THE U.U.T DISPLAY CENTER AND PRESS "F6" COMMAND KEY ONCE TO EXECUTE THE ALIGNMENT PROGREM.

- b. A SUB-MENU WILL SHOW UP ON THE SCREEN. SELECT"OK" ICON UNDER ITEM "1", THEN ADJUST THE SCREEN VR ON THE F.B.T OF THE U.U.T TO MAKE THE ANALYZER READS BETWEEN 1.5-2.5 FL.PRESS "ENTER" KEY ONCE.
- c. A "PRE-COLOR BALANCE ADJUST OK" WORDING WILL POP OUT ON THE SCREEN. ADJUST THE SCREEN VR ON THE F.B.T OF THE U.U.T TO MAKE THE ANALYZER READS BETWEEN 0.9-1.5 FL. PRESS "ENTER" KEY ONCE, SO THE WORDING WILL DISAPPEAR.
- d. SELECT "OK" ICON UNDER ITEM "2"(WHITE BALANCE ADJUST). PRESS "ENTER" KEY ONCE TO START THE "6500 K" WHITE BALANCE ADJUSTMENT.
- e. A "COLOR BALANCE ADJUSTMENT OK" WORDING WILL POP OUT ON THE SCREEN. PRESS "ENTER"KEY ONCE TO FINISH THE "6500 K" WHITE BALANCE ADJUSTMENT.
- f. SELECT "OK" ICON UNDER ITEM "3" (SECOND WHITE BALANCE ADJUST). PRESS "ENTER" KEY ONCE TO START THE "9300 K" WHITE BALANCE ADJUSTMENT.
- g. A "COLOR BALANCE ADJUSTMENT OK" WORDING WILL POP OUT ON THE SCREEN. PRESS "ENTER"KEY ONCE TO FINISH THE "9300 K" WHITE BALANCE ADJUSTMENT.
- h. A "COLOR BALANCE ADJUSTMENT OK & WRITE EPROM" WORDING WILL POP OUT ON THE SCREEN. PRESS "ENTER" AND "ESC" KEY CONTIGUOUSLY TO EXIT THE PROGRAM.
- i. RECYCLE THE POWER ON/OFF SWITCH OF THE U.U.T TO WRITE DATA INTO EEPROM
- 7. DATA DISPLAY SIZE SET UP:
 USE FRONT CONTROL MEMBRANCE SWITCH TO SET THE DISPLAY SIZE TO
 287MM*230 MM, VERTICAL AND HORIZONTAL RESPECTIVELY. DON'T PRESS "RECALL" BUTTÓN AT THIS MOMENT.
- 8. 6500 K BRIGHTNESS SET UP AND 6500 K/9300 K WHITE BALANCE VERIFICATION:
 - a. PRESS 6500 K BUTTON ON THE FRONT CONTROL MEMBRANCE SWITCH.
 - b. SELECT "OK" ICON UNDER ITEM "4" (RASTER/2" PATTERN/WHITE PATTERN).
 PRESS "ENTER" KEY ONCE. THE FOLLOWING CHART IS TO BE USED TO VERIFY THE SETTING AND THE ADJUSTMENT.

IT	EM ADJUST NAME	PATTERN	BRI.	CONT.	ADJUST	SPEC
1 2 3	RASTER BRI. RASTER BRI. 2" SQUARE	RASTER RASTER 2" SQUARE	_	MAX.	EXT-BRI. VR303	0.9FL-1.5FL 0.08FL 45FL ± 1FL
4	FULL WHITE BRI.	FULL WHITE	-	MAX.		29FL ± 1FL
5	W/B CHECK(6500 K)	2" SQUARE		-	EXT-CONT.	2FL X:313±10 Y:329±10
6	W/B CHECK (6500 K)		_			MAX.X:313±10 Y:329±10
7	W/B CHECK (9300 K)		-			2FL X:283±10 Y:298±10
8	W/B CHECK (9300 K)		-		EXT-CONT.	MAX X:283±10 Y:298±10
9	27FL SET	FULL WHITE	_ _	_	EXT-CONT.	27FL ± 1FL

- (d) MISCONVERGENCE AND FOCUS AND TILT ADJUSTMENT: NOTE:
 - * WARM UP U.U.T WITH BLACK BOX FOR AT LEAST 30 MINUTES. * C.R.T NECK FACES EARTH WEST. * MAGNETIC FIELD CHECK.

 - 1. CONNECT SIGNAL I/O CABLE FROM U.U.T TO SIGNAL INTERFACE BOX. POWER ON THE U.U.T.
 - 2. FOCUS VERIFICATION:
 - a. INPUT 64KHZ 1028*1024 OF THE TIMING, SELECT FULL WHITE PATTERN.
 - .b. PRESS "EXT-BRI." BUTTON OF THE FRONT CONTROL MEMBRANCE SWITCH TO ADJUST THE RASTER DISAPPEARS.
 - PRESS "EXT-CONTRAST" BUTTON OF THE FRONT CONTROL MEMBRANCE SWITCH TO ADJUST THE BRIGHTNESS IS 29 FL.
 - d. SELECT "@" CHARACTER PATTERN. IF FOCUS IS NOT GOOD, ADJUST FOCUS VR.

- 3. TILT ADJUSTMENT: a. INPUT 64KHZ 1028*1024 OF THE TIMING, SELECT CROSS HATCH PATTERN.
 - PRESS "TILT" BUTTON OF THE FRONT CONTROL MEMBRANCE SWITCH ONCE. PRESS "+" OR "-" BUTTON WHILE THE LED IS STILL LID TO ADJUST THE TILT TO LESS THAN 1mm.
- 4. MISCONVERGENCE ADJUSTMENT:
 - a. INPUT 64KZ 1028*1024 OF THE TIMING, SELECT FULL WHITE PATTERN.
 - b. ADJUST THE EXT-BRI.KEY UNTIL THE RASTER DISAPPEARS. THEN ADJUST THE EXT-CONTRAST KEY UNTIL THE BRIGHTNESS IS 27 FL.
 - c. CHANGE THE PATTERN TO CROSS HATCH PATTERN.
 - d. USE KLEIN GAUGE TO VERIFY THE MISCONVERGENCE BETWEEN R/G,R/B, AND G/B IS IN THE SPEC. (A AREA \leq 0.3mm, B AREA \leq 0.4mm)
 - e. CORRECT THE MISCONVERGENCE BY USING A SMALL MAGNETIC STRIP OR BY ADJUSTING MAGNETIC 4 POLES ON THE YOKE.
- EACH OF THE FOCUS VR, SCREEN VR, AND 4 POIES AND VR OF THE YOKE NEEDS TO PUT A WHITE DOT PAINT. EACH SMALL MAGNETIC STRIP AND MAGNETIC METAL NEEDS TO PUT A YELLOW BOND.
- (e) PER-CHECK FOR C.A.S ALIGNMENT BEFOR:
 - 1. CONFIRMATION OF IMAGE PERFORMACE :
 INPUT EACH A/C'S TIMING (HxV = 10x8 CROSS HATCH PATTERN).
 CONFIRM ITEM BY ITEM AS FOLLOWS:
 a. HORIZONTAL LINEARITY: H ≤ 10 %.
 CALCULATION: | max. min. / max. | x 100% ≤ 10 %

 - b. CONFIRM THE FUNTION OF THE RECALL BUTTON:
 ADJUST THE H/V PHASE AND THE H/V SIZE TO ANY POSITION, PRESS THE RECALL BUTTON, THEN CHECK THAT THE IMAGE PERFORMANCE IS IN ACCORDANCE WITH THE SPEC. IF YES, THIS MEANS THE RECALL BUTTON
 - 2. BRIGHTNESS UNIFORMITY CONFIRMATION:
 - a. INPUT 64KHZ 1028x1024 OF TIMING. SELECT 2" SQUARE PATTERN.
 - b. ADJUST THE EXT. BRI.KEY TO MAX.
 - C. ADJUST THE EXT. CONTRAST KEY UNTIL THE CENTER BRIGHTNESS IS 40 FL, THE BRIGHTNESS OF ANY POSITION OF CRT MUST NOT BE LESS THAN 65 % OF THE CENTER BRIGHTNESS.
 - STABILITY OF THE DISPLAY SIZE CONFIRMATION:
 - a. INPUT 64KHZ 1028x1024 OF TIMING. SELECT FULL WHITE PATTERN.
 - b. ADJUST THE EXT-BRI. KEY TO 5FL AND THEN 29FL. THIS MUST NOT CAUSE A DIFFERENCE GREATER THAN 1.5 mm.

 - 4. PURITY CONFIRMATION:
 a. INPUT 64KHZ 1028x1024 OF THE TIMING. SELECT FULL WHITE PATTERN_
 - ADJUST THE EXT-BRI. KEY UNTIL THE RASTER DISAPPEARS. THEN ADJUST THE EXT-CONTRAST KEY UNTIL THE BRIGHTNESS IS 25 FL. USE VISUAL b. ADJUST THE EXT-BRI. INSPECTION TO CONFIRM THE PURITY OF EACH R.G.B. AS FOLLOWS:

 a. WHEN ONLY INPUTING R, MUST NOT APPEAR G.B.

 b. WHEN ONLY INPUTING G, MUST NOT APPEAR R.B.

 c. WHEN ONLY INPUTING B, MUST NOT APPEAR R.G.
 - 5. VIDEO NOISE CONFIRMATION:
 INPUT 64KHZ 1028x1024 OF THE TIMING. SELECT CROSS HATCH PATTERN OR
 FULL WHITE PATTERN, CHECK BY VISUAL INSPECTION FROM A DISTANCE OF
 19 INCHS, WHETHER THE PICTURE HAS VIDEO NOISE OR NOT.
 - CHECK ALL INTERFACE CABLES ARE WELL CONNECTED AMONG THE PALLET, 12C INTERFACE CARD, AND THE U.U.T DMC 12C CONNECTOR.
 - 7. CLEAN THE C.R.T FACE OF THE U.U.T.
 - 8. PUT THE U.U.T IN THE MARKED AREA ON THE TOP OF THE PALLET.
 - 9. ALIGN THE U.U.T TO PARALLEL WITH THE PALLET.

- 10. POWER ON THE U.U.T AND BANG THE U.U.T TO FIND OUT IF THE SHOCK NOISE EXISTS.
- (f) FOR C.A.S ALIGNMENT:

AFTER PER-CHECK ALL UNIT IS OK, THEN THE UNIT TO AUTO-STATION FOR C.A.S ADJUSTMENT AS BE LOW.
a. ADJUST H/V-RASTER CENTER.

- b. ADJUST H/V-PHASE POSITION. | L-R | \leq 2 mm, | T-B | \leq 2 mm.
- c. ADJUST H/V-SIZE. MAIN TIMING(64KHZ 1028*1024) OF THE H/V-SIZE IS 287mm*230mm ±3mm OTHER TIMINGS OF THE H/V-SIZE IS 300mm*225mm ±3mm.
- d. ADJUST GEOMETIRIC OF THE PICTURE IS LESS THAN 1.5mm.
- e. ADJUST VERTICAL LINEARITY OF PICTURE IS LESS THAN 7.5%. | max. min. / max. | x 100% ≤ 7.5%
- F. HELMHOLTZ CHAMBER SET UP: SET UP THE LOCATIONS ACCORDING TO THE CUSTOMER'S REQUIREMENT.

TIMING CHART

FACTORY MODE SETTINGS						
DADAMERED		MODE				
PARAMETER	1	2	3	4	5	6
HORIZONTIAL TIMI	NG					
fh sync Khz	64.310	77.172	56.476	48.08	48.363	37.88
A H-TOTAL μS	15.550	12.966	17.707	20.8	20.677	26.40
B H-SYNC μS	0.970	1.2232	1.813	2.40	2.092	3.20
C H-BP μS	2.24	1.7124	1.920	1.28	2.462	2.20
D H-ACTIVE μS	11.960	9.7853	13.653	16.00	15.754	20.000
E H-FP μS	0.370	0.2446	0.320	1.12	0.369	1.000
VERTICAL TIMING						
fV SYNC HZ	60.000	72.556	70.07	72.19	60.000	60.32
O V-TOTAL mS	16.561	13.782	14.271	13.853	16.666	16.579
P V-SYNC mS	0.047	0.0389	0.106	0.125	0.124	0.1066
Q V-BP mS	0.498	0.428	0.513	0.478	0.600	0.607
R V-ACTIVE mS	15.923	13.277	13.598	12.480	15.880	1 5.840
S V-FP mS	0.093	0.0389	0.053	0.770	0.062	0.026
H/V SYNC POLARITY	+ / +	- / -	- / -	+ / +	- / -	+ / +
DISPLAY SIZE HOR. unit: mm VER.	287 230	287 230	300 225	300 225	300 225	300 225
RESOLUTION DOT LINE	1028 1024	1028 1024	1024 768	800 600	1024 768	800 600
fPIXEL MHZ	107.23	130.00	75.000	50.000	65.00	40.00
TEST MODE						

FACTORY MODE SETTINGS						
PARAMETER		MODE				
PARAMETER	7	8	9	10	11	12
HORIZONTIAL TIMI	NG					
fh sync KHZ	37.861	35.52	35.16	31.47	31.47	31.47
A H-TOTAL μS	26.413	28.150	28.444	31.777	31.777	31.777
B H-SYNC _ μS	1.270	3.920_	2.0	3.813	3.8 <u>1</u> 3	3.813
C H-BP μS	4.064	1.247	3.556	1.907	1.907	1.907
D H-ACTIVE μS	20.318	22.810	22.222	25.417	25.417	25.417
E H-FP μS	0.762	0.178	0.667	0.635	0.635	0.635
VERTICAL TIMING			-			
fV SYNC HZ	72.800	86.96	56.25	70.08	70.08	59.940
O V-TOTAL ms	13.735	11.485	17.778	14.268	14.268	16.683
P V-SYNC ms	0.079	0.112	0.057	0.0636	0.063	0.06366
Q V-BP mS	0.739	0.563	0.626	1.907	1.112	1.049
R V-ACTIVE ms	12.678	10.81	17.067	11.122	12.711	15.253
S V-FP mS	0.237	0.00	0.0284	1.176	0.381	0.318
H/V SYNC POLARITY	- / -	+ / +	+ \ +	+ \ -	- / +	- / -
DISPLAY SIZE HOR. unit: mm VER.	300 225	300 225	300 225	300 225	300 225	300 225
RESOLUTION DOT LINE	640 480	1024 768	800 600	640 350	640 400	640 480
fPIXEL MHZ	31.500	44.91	36.00	25.189	25.189	25.189
TEST MODE						

1. CATEGORY

COLOR

LANDSCAPE

2. CRT

SIZE:

17"

PHOSPHOR:

P22 MEDIUM SHORT

90°

DEFLECTION ANGLE: DOT PITCH X'MISSION RATE:

0.27 53.5%

3. f-SYNC.

MULTI-SYNC f-H: 31 -- 82 KHZ

f-V: 50 -- 90 HZ

4. RESOLUTION

MODE NO	Hf KHz	Vf Hz	DOT x LINE
01 02 03 04 05 06 07 08 09 10 11	64.310 77.172 56.476 48.083 48.363 37.861 37.88 35.26 31.47 31.47	60.00 72.556 70.07 72.19 60.00 72.8 60.32 86.25 59.94 70.08	1024 x 1024 1028 x 1024 1024 x 768 800 x 600 1024 x 768 640 x 480 800 x 600 1024 x 768 800 x 600 640 x 480 640 x 480 640 x 350

5. POWER SUPPLY:

POWER SUPPLY:

* POWER SUPPLY TYPE: UNIVERSAL SEGMENTED

* A/C LINE VOITAGE RANGE: 88 VAC - 132 VAC , 180 VAC - 264 VAC

* A/C LINE FREQUENCY RANGE: 50+-3 HZ, 60+-3 HZ

* POWER CONSUMPTION: < 150 W

* DEGAUSS: AUTOMATIC AND MANUAL

* POWER MANAGEMENT:

APM STATE DOWER SAVINGS AUTOMATIC RECOVERY TIME

APM STATE POWER SAVINGS AUTOMATIC RECOVERY TIME

ON STAND-BY SUSPEND

NONE MINIMAL<25W NOT APPLICABLE SHORT RECOVERY

LONGERRECOVERY ALLOWED SUBSTANTIAL<25W

OFF MAXIMUM<5W SYSTEM DEPENDENT
THE POWER INDICATOR LED COLOR IS GREEN IN THE ON STATE, ORANG
STAND-BY, SUSPEND AND IN THE OFF STATE. NOTE:

- 6. EXTERNAL CONTROL POWER SWITCH ADVANCED DIGITAL CONTROLS
- 7. MAGNETIC FIELD: H=0.01 V=0.49 **GAUSS**

Parts List 's' Indicates Standard Spare Part

			-
SPARE	Item Number	Description	COMMENT
s	1002096320	COVER REAR	
S	1004096320	CONTROL DOOR	
	1005094700	TILT BALL	
	1006094251	RETAINER	
•	1009094238 1010094310	LATCH FOOT	
_\$ \$.	101509433P	DOOR LOCK	
s	1020094623	BASE-2	
	2004694251	CHASSIS TOP	
	2039094330	ANODE CAP	
	8037114016	SCREW BIND(+) M4X16 HI-LOW	FOR TILT BALL & LATCH
	8081111530	SCREW BIND/HD MACH 1/4"-20X30 SCREW PAN(+)/HD CAP TAPPING M3	CHAS TOP & CHAS R X2, CHAS TOP & CHAS L X2
	8127113006 8350113016	SCREW BIND(+) M3X16 W/S W.F.W.	FOR BZL & CHAS & R.L. ASS'YX4
	8504113006	SCREW BID(+) M3X6 MACH W/DISK	CHAS REAR & CHAS TOP X1
	9004096320	COVER 12C	
	9012096332	MANUAL	
	9019094330	ANODE SHEET	F00 W10
	C488100009	CONN. 10P & WIRE ASS'Y CONN. BNC 180 DEGREE BNB-001	FOR BNC FOR INPUT
	4490100208 C459423L10	GND WIRE ASS'Y	FOR FILTER
	C488030174	CONN. 3P & WIRE CORE ASS'Y	FILTER TO SW
	4050247455	RES-CF 1/2W J 470K -AT-	R99
	5290003000	TUBE-SHRINK ID=3¢	
_	5290005000	TUBE-SHRINK ID=5¢	F11 TEM
s	7061620129 2004094660	LINE FILTER IA5-H33 HEAT SINK HOLDER	FILTER FOR D304
	2010196330	CHASSIS REAR	10K 5564
	3060040060	RIVET NYLON 4.0X6.0	FOR PCB & CHAS REAR
S	410024288A	TRS.2SC4288A TO-3PL	FOR Q307
S	4100310180	TRS. 2SD1018 W/MOUNTING KIT	Q320
S	4101511010	TRS. MOSFET 2SK1101 SC-67 DIODE FMGG26S TO-220	Q314 D306
s s	4130400260 4130600032	DIODE DTV32-1500B	D304
3	5510102500	TUBE SI-RUBBER 45T-11¢X25L	FOR D304
	5520100005	INSULATOR SI-RUBBER TO-3P	FOR 9307,320
	8026113010	SCREW BIND(+) TAPPING M3X10 TR	FOR Q314,D306 & CHAS REAR
	8026113012	SCREW BIND(+) ZN3C M3X12 SELF	FOR Q307,320
	8026113014 1006096330	SCREW TRI "B" M3X14 SNAP BUSHINGS (NB1722)	FOR H/S HOLDER & CHAS REAR FO STAND X2
	1013094180	REVLT ¢3	FOR IZC COVER
	2001096320	STAND (5 BNC)	
	2003096320	BKT UPPER	
	3011100030	NUT ISO HEX M3 Z1NC	FOR AC SOCKET X2
	3211300000 4410501143	WASHER SPRING M3 5.2¢X3.2¢X0.8 MEMBRANCE SWITCH CAM6330	FOR AC SOCKET
	5541025160	CABLE TIE-BINDING 2.5X160	FOR CORE & STAND X3
	8002113012	SCREW FLATE HD(+) M3X12	FOR AC SOCKET
	8127113006	SCREW PAN(+)/HD CAP TAPPING M3	FOR BKT UPPER & STAND ASS'Y
	8504113006	SCREW BID(+) M3X6 MACH W/DISK	FOR POWER SW PCB
	9005096320 9007096320	DECO PLATE (5 BNC)	
	9007096320	DECO SHEET R DECO SHEET L	
	9010096320	SW INSULATOR	
	C001134720	BRAID WIRE ASS'Y	
	C460633010	TILT RING WIRE ASS'Y	TILT WIRE
_	C488040051 C710633010	CONN. 4P & WIRE ASS'Y W/CORE	FOR YOKE
S	1003096330	I/O CABLE ASS'Y KNOB PUSH	FOR HCS2
	1006096330	SNAP BUSHINGS (NB1722)	FOR CRT FRAME
	1009096332	CONTROL BOX	. Sec. 1
S	1022194A39	BEZEL	
	1023094000	BUSHING SNAP	FOR CHASSIS BOTTOM X1
	1023096330	KNOB PUSH	·
	2001694235 2002094660	CRT FRAME - CHASSIS (R)	
	2004096320	BKT LOWER	
	2008094251	BKT BEZEL	
	2008096000	CHASSIS (L)	
	2012096710	CHASSIS L	EOD COT EDANC O CUAC D
	201309632D 2016094230	FINGER (B) STUD M3X12	FOR CRT FRAME & CHAS R VIDEO BOARD X4
	20.0077230	CION HARIE	TIPES SOUTH AT

2017094030	GROUND CLAMP	FOR I/O CABLE
2018094140	TOOTHED LOCK WASHER	CRT & CRT FRAME X4
2024094660	CHASSIS (BTM)	
2027094660	CONDUCTOR	
2046094330	CRT FINGER	
3051100050	NUT ZINC CHROMATE M5	CRT & CRT FRAME X4
3111502016	FLAT WASHER M5 T=1.6	CRT & CRT FRAME X4
5530200101	CORD CRAMP TH-C	CHAS R X3,CHAS REAR X2
5530200102		
5530307005	SUPPORT PCB CBS-8K	FOR POWER SAVING & CHASSIS R X3
5541025095	CABLE TIE 2.5X90	FOR WIRE ASSIY
5541025160	CABLE TIE-BINDING 2.5X160	
7010021117	CRT M41KXK27XX10 (K1)	
7020176330	DEGAUSSING COIL	FOR CRT
8026113006	SCREW BIND(+) TAPPING TRI ANGL	FOR CRT FRAME & CRT FINGER X12
8026113012	SCREW BIND(+) ZN3C M3X12 SELF	BZL & BKT X8
8121114008	SCREW CAP BID(+) M4X8 TAPPING"	CHAS BTM I/O GNDX2, CHAS REAR MAIN GND X1
8127113006	SCREW PAN(+)/HD CAP TAPPING M3	CHAS REAR & CHAS BOTTOM X2
		,CHAS REAR & CHAS R X2,CHAS REAR & CHAS L X2,CRT F
		RAME & STAND X2, WIRE & CHAS R X1, CRT FRAME & CHAS
		BOTTOM X2, CHAS BOTTOM & CHAS R X2, CHAS BOTTOM & CH
		AS L X2,CRT FRAME & CHAS L X2,LOWER BKT UPPER & ST
		AND ASS'Y X 6,CRT FRAME & CHAS R X2
8504113006	SCREW BID(+) M3X6 MACH W/DISK	FOR VIDEO BOARD X4, CHAS R & STUD X4, POWER SW.PCB X
8504113008	SCREW BIND(+) M3X8 MACH W/DISK	FOR CONTROL BOX & UPPER BKT X1, CONTROL BOX & LOWE
4304113000	SOUTH STREET, NOVO MACH MASTOR	R BKT X3. MAIN PCB & CHAS BOTTOM X6
8504113010	SCREW BIND(+) M3X10 MACH W/DIS	
9005096332	NAME PLATE	THE THE THE THE THE T
		END

s

SPA	RE Item Number	Description	COMMENT
s s	\$\$63320220-404 \$\$6330192 \$120694000	LED & PCB ASS'Y CONN. 3P WIRE ASS'Y LED LT9463-23 Y/G	FOR SK903
S	4141103900	P.C.B. LED (28.5X12.3)	
			END

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SP	ARE Item Number	Description	COMMENT
s	SS63320320-404	POWER SWITCH PCB ASS'Y	
•	C488030173	CONN. 3P & WIRE ASS'Y	SW TO PCB
S	4141102900	PCB SW 76X43.5	
S	4410204004	SWITCH POWER SDDS32B7U-CK	SWITCH
	4490310193	CONN. 3P WAFER 2 OPEN RIGHT	SK6
			END

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SPARE	Item Number	Description	COMMENT
S A	M63300244-V	NECK PCB ASS'Y (SUB-2)	
	2014096330	VIDEO SHIELD	
	2022094660	COVER VIDEO	•
	4010800052	RES-CHIP 1/8W J OR 1206	JD1,2
	4010810052	RES-CHIP 1/8W J 10R 1206	RE5
	4010810352	RES-CHIP 1/8W J 10K 1206 RES-CHIP 1/8W J 1.2K 1206	RD1
	4010812252 4010839152	RES-CHIP 1/8W J 112K 1206	RD4 RA3,RB3,RC3
	4010839252	RES-CHIP 1/8W J 3.9K 1206	RD7
	4010847452	RES-CHIP 1/8W J 470K 1206	RD5
	4010856152	RES-CHIP 1/8W J 560R 1206	RE2
_	4010875052	RES-CHIP 1/8W J 75R 1206	RA1,RB1,RC1
	4010882252	RES-CHIP 1/8W J 8.2K 1206	RD3
	4010891052	RES-CHIP 1/8W J 91R 1206	RA2,RB2,RC2,RD2,RE1
\$	4010891152 412014148T	RES-CHIP 1/8W J 910R 1206 DICOE 1N4148 (BAS32L) MLF SMD	RE3,RE4 DA1,2,DB1,2,DC1,2
S	4120500561	DIODE ZENER RD5.1EB2 1/2W -AT-	ZD1
s	4141093504	P.C.B. DAUGHTER (57.1X50.2)	
s	4159120500	IC LM1205N 28PIN	IO1
S	4159188100	IC LM1881N 8PIN	ICD2
	5156100T50	CAP-EC6 10UFM 50V -RT-	©1,©3,CE5 .
	5156470T16	CAP-EC6 47UFM 16V -RT-	Φ9
	5171105L35 5171106L16	CAP-TC 1UFK 35V RT PITCH:5MM	CA2,CB2,CC2
	7146223456	CAP-Y5V 0.022UFZ 50V CHIP 0805	CA1,CB1,CC1 CD8
	7147104456	CAP-CC +80%-20% 0.1UF/50V CHIP	CA3,CB3,CC3,CC4,CD2,CD4,CD5,CD7,CE1-CE4
	2043394330	HEAT SINK	FOR 9401,421,441
	3011100030	NUT ISO HEX M3 ZINC	
S	41061262A0	TRS. BFQ262A TO-126	FOR Q401,421,441
	5520542001	INSULATOR CERAMIC TO-126	FOR 9401,421,441
	8504113012	SCREW BIND(+) M3X12 MACH W/DIS	FOR 9401,421,441
s	C488C20156 4106116200	CONN. 2P & WIRE ASS'Y W/CORE TRS. BFQ162 TO-126	FOR R.G.B 0402,422,442
S	41061235A0	TRS. BFQ235A TO-220	Q403,423,443
S	41061255A0	TRS. BFQ255A TO-220	0404,424,444
S	4173010253	RES-MOF 3W J 1K -SF-	R417,437,457
S	4173012253	RES-MOF 3W J 1.2K -SF-	R409,410,429,430,449,450
	4490200300	BASE 2P 2.54MM SXB-XH-A	P405
	4490300320 4490400300	CONN. 3P WAFER 173979 R/A CONN. 4P SXB-XH	P201 P401
	4490600300	CONN. 6P SXB-XH-A	P404
	4491000300	BASE 10P 2.54MM SXB-XH-A	P403
	4491100320	WAFER 11P 2.0mm 173979 R/A	P420
	5074104101	CAP-HEF 0.1UFK 100V -SF-	C480,481,499
	5074224102	CAP-MEF 0.22UFK 250V -SF-	C407,427,447
s	515X470S01 411020945P	CAP-ECX 47UFM 100V -SF- TRS. 2SC945P TO-92 -RT-	C476,477 Q461
S	4110219210	TRS. 2SC1921 TO-92M -RT-	Q405,425,445
•	5116103111	CAP-MC 0.01UFK 100V -RT-	C492
	5128101552	CAP-CCSL 100PFJ 50V -RT-	C485
	5128121552	CAP-CCSL 120PFJ 50V -RT-	C446,479
	5128221552	CAP-CCSL 220PFJ 50V -RT-	C409,429
	5128331552	CAP-CCSL 330PFJ 50V -RT-	C484
	5128390552 5134104452	CAP-CCSL 39PFJ 50V -RT- CAP-SCF 0.1UFZ 50V -RT-	C426 C405,425,445,466,483
	515X221T16	CAP-ECX 220UFM 16V -RT-	C490
	515x470T16	CAP-ECX 47UFM 16V -RT-	C428,448
	5156470T16	CAP-EC6 47UFM 16V -RT-	C491
	5171106T25	CAP-TC 10UFM 25V RT	C408
	4050115255	RES-CF 1/2W J 1.5K -AT- SMALL	R413,433,453
	4050224055	RES-CF 1/2W J 24R -AT-	R407,427,447
	4050233955 4050256255	RES-CF 1/2W J 3.3R -AT- RES-CF 1/2W J 5.6K -AT-	R461 R404,424,444
	4050410055	RES-CF 1/4W J 10R -AT-	R411,412,431,432,451,452
	4050410155	RES-CF 1/4W J 100R -AT-	R202,408,428,448,485
	4050410255	RES-CF 1/4W J 1K -AT-	R473,481,486
	4050410355	RES-CF 1/4W J 10K -AT-	R474,475
S	4050410555	RES-CF 1/4W J 1M -AT-	R416,436,456
	4050412155 4050420055	RES-CF 1/4W J 12OR -AT- RES-CF 1/4W J 2OR -AT-	R415,435,455
	4050420055 4050427155	RES-CF 1/4W J 20R -AT-	R401,403,405,421,423,425,443,445 R414,434,454
	4050443055	RES-CF 1/4W J 43R -AT-	R406,426,446
	4050443155	RES-CF 1/4W J 43OR -AT-	R472
	4050451355	RES-CF 1/4W J 51K -AT-	R402,422,442
S	4120141480	DIODE 1N4148 (SI) -AT-	D403-406,423-426,443-446
S	4120500561	DIODE ZENER RD5.1EB2 1/2W -AT-	D463,465
S	4141090703	P.C.B. NECK	

4321828006 COIL PEAKING 0.82UH -AT4322209046 FERRITE BEAD 2UH -AT4322309006 FERRITE BEAD 3UH -AT5406100000-000 JUMP WIRE 0.6¢ J401,402,404-414,417-421,L404,405,424,425,444,R201

SPA	RE Item Number	Description	COMMENT
s	AM63300544-V	POWER SAVING PCB (SUB-2)	
	C488060047	CONN.6P & WIRE ASS'Y	FOR SK904
	4050451355	RES-CF 1/4W J 51K -AT-	R923 (FOR HITACHI/TOSHIBA IC74HC123)
	4050475455	RES-CF 1/4W J 750K -AT-	R925 (FOR HITACHI/TOSHIBA IC74HC123)
S	4155741230	IC 74HC123	10904
s	4159140130	IC MC14013 BCP	1C905
s	4159339000	IC LM339 16PIN	10902,903
_	4490300130	CONN. 3P WAFER 2.5MM (B3B-XH-A	sk903
	4490800130	CONN. 8P B8B-XH-A	SK902
S	4110105610	TRS. 2SB561 TO-92 -RT-	99 02
S	411030667A	TRS. 2SD667A TO-92M -RT-	9903
S	415978L05A	IC. MC78L05 TO-92 3PIN	IC901
	5116102111	CAP-MC 0.001UFK 100V -RT-	C906,914
	5116103111	CAP-MC 0.01UFK 100V -RT-	C904,911
	5116104111	CAP-MC 0.1UFK 100V -RT-	C909
	5116222111	CAP-MC 0.0022UFK 100V -RT-	C905,908,910
	515X100T50	CAP-ECX 10UFH 50V -RT-	C902,903
	515X221T10	CAP-ECX 220UFM 10V -RT-	.C912
	5156221135	CAP-EC6 220UFM 35V -RT-	C901
	4050215355	RES-CF 1/2W J 15K -AT-	R926
	4050220155	RES-CF 1/2W J 200R -AT-	R937
	4050410255	RES-CF 1/4W J 1K -AT-	R901,904,928,938
	4050410355	RES-CF 1/4W J 10K -AT-	R903,910-913,934
	4050420255	RES-CF 1/4W J 2K -AT-	R929
	4050422355	RES-CF 1/4W J 22K -AT-	R905-907,909,921
	4050424255	RES-CF 1/4W J 2.4K -AT-	R920
	4050447155	RES-CF 1/4W J 470R -AT-	R935
	4050447255	RES-CF 1/4W J 4.7K -AT-	R916,927
	4050447355	RES-CF 1/4W J 47K -AT-	R902,917 .
	4050456355	RES-CF 1/4W J 56K -AT-	R918
	4050468155	RES-CF 1/4W J 680R -AT-	R933
	4050468255	RES-CF 1/4W J 6.8K -AT-	R908
	4050468355	RES-CF 1/4W J 68K -AT-	R914
	4050468455	RES-CF 1/4W J 680K -AT-	R919
	4050475455	RES-CF 1/4W J 750K -AT-	R915
S	4120104001	DIODE 1N4001 -AT-	D905
S	4120146060	DIODE 1N4606 (SI) -AT-	D907-919
S	4120500685	DIODE ZENER 1/2W 6.8V 500MW RD	ZD902
S	41205009C1	DIODE ZENER HZ9C1 -AT-	ZD901
S	4141099001	POWER SAVING 65X126	
	4171047256	RES-MOF 1W J 4.7K -AT-	R936
	5406100000-000	JUMP WIRE 0.6¢	J901-926
	2016094251	STUD M3X9	FOR POWER SAVING PCB
	8504113006	SCREW BID(+) M3X6 MACH W/DISK	FOR POWER SAVING PCB

SPAR	E Item Number	Description	COMMENT
S	AM63300744-V	SUB NECK PCB ASS'Y (SUB-2)	•
3	1009091037	BUMPER	FOR NECK SHIELD
s	4100226880	TRS. 2SC2688 TO-126	Q102
S	4172010056	RES-MOF 2W J 10R -AT-	R121
3	4490200130	CONN. 2P WAFER 2.5MM	P101-103
	4490500130	CONN. 5P WAFER 2.5MM	P104
	4570304260	SOCKET CRT	SOCKET TOSHIBA CRT
s	5022051040	VR W/SHAFT 2M OHM	VR101
3	5074103104	CAP-MEF 0.01UFK 400V -SF-	C105,111
	5103102293	CAP-CCE 1000PFM 3KV -SF-	•
	51041034C3	CAP-CCF +80%-20% 0.01UF/2KV -S	C101,102 C103
	51041034C3 51042234C3	CAP-CCF +80%-20% 0.010F/2KV -	C104
	5113224150	CAP-MC 0.22UFK 50V -SF-	
	51901035A3	CAP-MPP 0.01UFJ 2KV -SF-	C112
	7050506330	FOCUS X'FORMER	
_			T101
S	411020945P	TRS. 2SC945P TO-92 -RT-	9101
	5116104111	CAP-MC 0.1UFK 100V -RT-	C113,114
	5134104452	CAP-SCF 0.1UFZ 50V -RT-	C115
	5164229T50	CAP-BP 2.2UFM 50V RT 105C	C108
	4050220455	RES-CF 1/2W J 200K -AT-	R115
	4050418455	RES-CF 1/4W J 180K -AT-	R122
	4050420155	RES-CF 1/4W J 200R -AT-	R117
	4050420455	RES-CF 1/4W J 200K -AT-	R113
	4050422355	RES-CF 1/4W J 22K -AT-	R114,120
	4050451255	RES-CF 1/4W J 5.1K -AT-	R119
	4050462255	RES-CF 1/44 J 6.2K -AT-	R116
	4050462455	RES-CF 1/4W J 620K -AT-	R118
	4050468455	RES-CF 1/4W J 680K -AT-	R123
	4050491255	RES-CF 1/4W J 9.1K -AT-	R112
	4060210115	RES-CC 1/2W K 100R -AT-	R101-103
	4060210215	RES-CC 1/2W K 1K -AT-	R104
_	4060210315	RES-CC 1/2W K 10K -AT-	R105
S	4060210515	RES-CC 1/2W K 1M -AT-	R109, 111
	4060222415	RES-CC 1/2W K 220K -AT-	R110
_	4060251315	RES-CC 1/2W K 51K -AT-	R106-108
S	4120141480	DICOE 1N4148 (SI) -AT-	D103
S	4130100218	DIODE RGP02-18E-5300 -AT-	D101,102
S	4141091202	P.C.B SUB-NECK	. 40/
	4321100006	COIL PEAKING 10UH -AT-	L104
	4321158006	COIL PEAKING 0.15UH -AT-	L101-103
	4705415001	SURGE PROTECTOR 200V 52M -AT-	NE101-103
	5406100000-000	JUMP WIRE 0.6¢	J101-104,106

SPA	RE Item Number	Description	COMMENT
s	AM63325044-V	MAIN PCB ASS'Y (SUB-2)	
s	AM63300144-V	DEF PCB ASS'Y (SUB-2)	
	201209632D	FINGER (A)	FOR NECK SHIELD
	2013096330 5541025095	NECK SHIELD CABLE TIE 2.5X90	FOR WIRE ASS'Y
	8026113006	SCREW BIND(+) TAPPING TRI ANGL	FOR H.V SYNC BUFFER PCB
	9009096330	NECK SHEET	
_	2046294000	HEAT SINK F	FOR IC201 IC201
S	4159317001 8504113010	IC LM317T W/MOUNTING KIT TO-22 SCREW BIND(+) M3X10 MACH W/DIS	FOR IC201
	2023194660	HEAT SINK	FOR IC202
ş	41591675A0	IC TDA1675A 15PIN	IC202
	8504113008	SCREW BIND(+) M3X8 MACH W/EISK	FOR IC202
s	2046294000 410584552B	HEAT SINK F TRS. BUK 455-200B TO-220	FOR Q315,317 Q315,317
•	8504113008	SCREW BIND(+) M3X8 MACH W/DISK	FOR Q315,317
	C488020155	CONN. 2P & WIRE ASS'Y 550MM	FOR P405
	C488040056	CONN. 4P & WIRE ASS'Y	P301
	C488040073 C488040074	CONN. 4P & WIRE ASS'Y CONN. 4P & WIRE ASS'Y	FOR P205 FOR P306
	C488040078	CONN. 4P & WIRE ASS'Y	, 6., 1, 5.5
	C488040079	CONN. 4P & WIRE ASS'Y	FOR P201(H.V SYNC)
	C488051062	CONN. 5P & WIRE ASS'Y	FOR P302
	C488060040 C488110013	CONN. 6P & WIRE ASS'Y CONN. 11P & WIRE ASS'Y	FOR P307 FOR P202
	1005083030	STAND TO-220 -SF-	IC201,301,Q304,315,317
S	4052043355	RES-CF 2W J 43K -AT-	R349
S	4100226880	TRS. 2SC2688 TO-126	Q329
S S	410030669A 4103200122	TRS. 2SD669A TO-126 TRS. TIP 122	Q318 Q332
Š	4103200127	TRS. TIP127 TO-220	9331
S	4105906200	TRS. MOSFET IRF620 TO-220	9304
S	4159173580	IC HA17358 8PIN	IC203,204
s	4171075856 4172010156	RES-MOF 1W J 0.75R -AT- RES-MOF 2W J 100R -AT-	R241 R247
Š	4172010356	RES-MOF 2W J 10K -AT-	R329,331
S	4172012156	RES-MOF 2W J 120R -AT-	R335-337
S	4172024956	RES-MOF 2W J 2.4R -AT- RES-MOF 2W J 47R -AT-	R242 R338
S S	4172047056 4177312153	RES-MOF 3W J 120R -SF- SMALL	R373,391
s	4177320353	RES-MOF 3W J 20K -SF- SMALL	R322,323
	4323600003	COIL CHOKE 60UH -SF-	L306
	4323750103 4325101003	COIL CHOKE 75UH -SF-	L307 L304
	4325339003	COIL CHOKE 3.3MH -SF-	L305
	4420412002	RELAY 12V	RL102 ·
	4490400207	CONN. 4P WAFER ROUND PIN	P305 FOR YOKE
	4490400260 5074103102	CONN. 4PIN WAFER 2.0MM 173981- CAP-MEF 0.01UFK 250V -SF-	P203,204 C225
	5074224102	CAP-MEF 0.22UFK 250V -SF-	C354
	5074335102	CAP-MEF 3.3UFK 250V -SF-	C334
	5074475101 5084104510	CAP-MEF 4.7UFK 100V -SF- CAP-MPC 0.1UFJ 100V -SF-	C325 C209,210
	5103103452	CAP-CCE 0.01UFZ 50V -RT-	C699
	5104104443	CAP-CCF +80%-20% 0.1UF/500V -S	c340
	5113154150	CAP-MC 0.15UFK 50V -SF-	C211
	5113224550 515F471S35	CAP-MC 0.22UFJ 50V -SF- CAP-ECF 470UFM 35V -SF-	C208 C335,336
	515x221s35	CAP-ECX 220UFM 35V -SF-	C220
	515x221s50	CAP-ECX 220UFM 50V SF-	C342
	515x471s16	CAP-ECX 470UFM 16V -SF-	C212
	5156100\$03 5156102\$ 3 5	CAP-EC6 10UFM 250V -SF- CAP-EC6 1000UFM 35V -SF-	C338 C216
	5156222816	CAP-EC6 2200UFN 16V -SF-	C213
	5190184543	CAP-MPP 0.18UFJ 400V -SF-	C314
	5190364543	CAP-MPP 0.36UFJ 400V -SF-	C316
	5190914543 5195274543	CAP-MPP 0.91UFJ 400V -SF- CAP-PMHA 0.27UFJ 400V -SF-	C315 (2) (2) (3) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4
	5221110400	POT(CERMET) 0.3W 100K 6¢ STAND	VR304
	5221125450	POT(CERMET) 0.5W 250K 8¢ STAND	VR305
	5225110310	POT(CERMET) 0.3W 10K 6¢ LAY-DO	VR303,306
	5228150310 5322113000	POT(CARBON) 0.1W 50K 6¢ LAY-DO WIRE UL1007 #22 BRN 290-K-K	VR201 FOR VS-VS'
	5322133000	WIRE UL1007 #22 ORG 290-K-K	6.3V-D207
	5322181500	WIRE UL1007 #22 GRY 140-K-K	FOR N-N'
	5322214014	WIRE UL1015 #22 BRN 390-TERM	FOR HCS1
	5322224024	WIRE UL1032 #22 RED 390-TERM	FOR VCP

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FOR 300V
                      WIRE UL1015 #22 ORG 440-TERM 1
      5322234514
      5322243814
                      WIRE UL1015 #22 YEL 370-TERM
                                                            FOR HCS2
                      WIRE UL1007 #24 YEL 40-K-K
                                                            FOR L-LCH3
      5324140500
      5324151500
                      WIRE 1007 #24 GRN 140-K-K
                                                            FOR R-R'
                                                            FOR FB'-P
                      WIRE UL1007 #24 BLU 150-K-K
      5324161600
                                                            FOR FB-Q
                       WIRE UL1007 #24 VIO 140-K-K
      5324171500
                       WIRE 1007 #24 WHT 65-K-K
      5324190700
                                                            T302
S
      7050314660
                       F.B.T
                                                            T303
                       O/P TRANSFORMER
      7050904660
                                                            L303
      708$226330
                       COIL HOR LINEARITY
                                                            Q330
                       TRS. 2SA1376A
      410001376A
S
                                                            9305,327,333
                       TRS. 2SA733 TO-92M -RT-
      4110007330
                                                            9204,207,309,319
                       TRS. 2SB647A(C) -RT-
S
      411010647A
      411020945P
                       TRS. 2SC945P TO-92 -RT-
                                                            9206,306
                       TRS. 2SC2655 TO-92M -RT-
                                                            Q301
S
      4110226550
                       TRS. 2SD667A TO-92M -RT-
                                                            Q203,205
S
      411030667A
                                                            Q324-326,337
      4116610010
                       TRS. RN1001 -RT-
S
                                                            9312,316,321,322,323,328,336
                       TRS. RN1203 -RT-
      4116612030
                       CAP-CCS 470PFK 1KV -RT-
                                                            C324
      5101471132
                       CAP-CCB 680PFK 1KV -RT-
                                                            C310,311
      5101681132
                                                            C218,301,358,359,3A4
                       CAP-MC 0.01UFK 100V -RT-
      5116103111
                                                             c206,302,318,320,323
                       CAP-MC 0.1UFK 100V -RT-
      5116104111
                       CAP-MC 0.0022UFK 100V -RT-
                                                            C3A2
      5116222111
                       CAP-MC 0.056UFK 50V -RT-
                                                            C207
      5116563150
                                                             C215, 222, 329, 341
                       CAP-SCF 0.1UFZ 50V -RT-
      5134104452
      515X100S02
                       CAP-ECX 10UFM 160V -SF-
                                                             c337
                       CAP-ECX 100UFM 25V -RT-
                                                             c303,330
      515X101T25
                       CAP-ECX 100UFM 50V -RT-
                                                             C321
      515X101T50
                       CAP-ECX 1UFM 50V -RT-
                                                             C325,327,328
      515X109T50
                       CAP-ECX 2.2UFM 50V -RT-
                                                             C360
      515XZZ9T50
                                                             C221
                       CAP-EC6 100UFM 10V -RT-
      5156101T10
                       CAP-EC6 100UFM 16V -RT-
                                                             C331
      5156101T16
                       CAP-ECS 1UFM 50V -RT-
                                                             c214,304,355
      5156109T50
                                                            C332
                       CAP-EC6 220UFM 16V -RT-
      5156221T16
                       CAP-EC6 2.2UFM 50V -RT-
                                                             C217,339
      5156229T50
                       CAP-EC6 3.3UFM 50V -RT-
                                                             C224,226
      5156339T50
                       CAP-EC6 47UFM 35V -RT-
                                                             C219
      5156470T35
                                                             FOR DEF PCB & DAUGHTER PCB
      3052000300
                       EYELET
                       RES-CF 1/2W J 120R -AT-
                                                             R321
      4050212155
                                                             R240
                       RES-CF 1/2W J 180R -AT-
       4050218155
                                                             R355-357,397
                       RES-CF 1/2W J 820R -AT-
      4050282155
                       RES-CF 1/4W J 100R -AT-
                                                             R211,212
      4050410155
                                                             R222,244,249,251,253,306,307,308,374
                       RES-CF 1/4W J 1K -AT-
       4050410255
                       RES-CF 1/4W J 10K -AT-
RES-CF 1/4W J 1M -AT-
                                                             R226,310,3A3,3A4
       4050410355
       4050410555
                                                             R394,3B2
                       RES-CF 1/4W J 13K -AT-
                                                             R252,366
       4050413355
       4050415355
                       RES-CF 1/4W J 15K -AT-
                                                             R266,365
                       RES-CF 1/4W J 150K -AT-
                                                             R392
       4050415455
                       RES-CF 1/4W J 180R -AT-
                                                             R238
       4050418155
       4050418255
                       RES-CF 1/4W J 1.8K -AT-
                                                             R245,3A2
                                                             R246,278
       4050418355
                       RES-CF 1/4W J 18K -AT-
       4050418455
                       RES-CF 1/4W J 180K -AT-
                                                             R395
                       RES-CF 1/4W J 2K -AT-
                                                             R248,313,350
       4050420255
                       RES-CF 1/4W J 20K -AT-
                                                             R363
       4050420355
                       RES-CF 1/4W J 22R -AT-
RES-CF 1/4W J 2.2K -AT-
                                                             R311
       4050422055
                                                             R237,371
       4050422255
                       RES-CF 1/4W J 220K -AT-
                                                             R370
       4050422455
                       RES-CF 1/4W J 2.2M -AT-
                                                             R367,382
       4050422555
                       RES-CF 1/4W J 24K -AT-
RES-CF 1/4W J 27K -AT-
                                                             R364,381
       4050424355
                                                             R358
       4050427355
       4050430255
                       RES-CF 1/4W J 3K -AT-
                                                             R250,361
                       RES-CF 1/4W J 330R -AT-
                                                             R228
       4050433155
                        RES-CF 1/4W J 33K -AT-
                                                             R231
       4050433355
                       RES-CF 1/4W J 330K -AT-
                                                             R393
       4050433455
       4050433955
                        RES-CF 1/4W J 3.3R -AT-
                                                             R236
                        RES-CF 1/4W J 36K -AT-
                                                             R359
       4050436355
                                                             R3A6
       4050439255
                        RES-CF 1/4W J 3.9K -AT-
                        RES-CF 1/4W J 39K -AT-
                                                             R277
       4050439355
                       RES-CF 1/4W J 4.3K -AL
RES-CF 1/4W J 470R -AT-
                                                             R239
       4050443255
       4050447155
                                                             R260
                        RES-CF 1/4W J 4.7K -AT-
                                                             R213-218,229,342,343,3A1
       4050447255
                        RES-CF 1/4W J 5.1K -AT-
                                                             R360
       4050451255
                        RES-CF 1/4W J 51K -AT-
                                                             R3A5
       4050451355
                                                             R230,301
                        RES-CF 1/4W J 5.6K -AT-
       4050456255
                        RES-CF 1/4W J 560K -AT-
                                                             R332,334
       4050456455
                        RES-CF 1/4W J 680R -AT-
                                                             R309
       4050468155
                        RES-CF 1/4W J 6.8K -AT-
       4050468255
                                                             R369
                        RES-CF 1/4W J 68K -AT-
                                                             R232
       4050468355
       4050482255
                        RES-CF 1/4W J 8.2K -AT- -
                                                             R243
                        RES-CF 1/4W J 91K -AT-
                                                             R368
       4050491355
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s
      4070410555
                      RES-MF 1/4W J 1M -AT-
                                                            R300
                      RES-MF 1/2W J 3.3R SMALL -AT-
                                                            R3A8
      4077B33955
                      DIODE 1N4002 -AT-
                                                            D212
S
      4120104002
                                                            0205-208,213,215,310,327,330-332,335,340,342-344
                      DIODE 1N4148 (SI) -AT-
S
      4120141480
                      DIODE ZENER 14.5-15.1V -AT-
                                                            D321,322,325,326
S
      4120500152
      41205004A2
                      DIODE ZENER HZ4A2 -AT-
                                                            D211,214,312
S
      4120500561
                      DIODE ZENER RD5.1EB2 1/2W -AT-
                                                            D220
S
      41205009C1
                      DIODE ZENER HZ9C1 -AT-
                                                            D301
S
S
      4120552798
                      DIODE ZENER 1N5279BRL
                                                            D333
S
      4130100100
                      DIODE RGP10D-5302 -AT- 1A
                                                            D311
                                                            D308,309,315,334,341
      413010010J
                       DIOOE RGP10J-5390 1A 600V -AT-
s
      413010010M
                       DIODE RGP10M-5311 -AT-
                                                            D316
s
      4130100218
                      DIODE RGP02-18E-5300 -AT-
                                                            0317,318
                       DIODE EGP20C-5390 -AT-
                                                            D313,314
S
      413020120C
S
      4141095500
                       P.C.B. I2C
S
      4141101005
                       P.C.B MAIN 300X300
                       P.C.B. H.S. 182X49
S
      4141101101
                       P.C.B. TRS. 182X49
      4141101102
                       P.C.B. H-OUT 180X40M/M
      4141102101
                       RES-MOF 1W J 300R -AT-
                                                            R324
      4171030156
                       RES-MOF TW J 33R -AT-
                                                            R320
      4171033056
      4171033256
                       RES-MOF 1W J 3.3K -AT-
                                                            R327
                       RES-MOF 1W J 3.3R -AT-
                                                            R3A9
      4171033956
      4256041001
                       RES-PR MF 1/4W F 1K -AT-
                                                            R221
      4256041002
                       RES-PR MF 1/4W F 10K -AT-
                                                            R225,326,346
                       RES-PR MF 1/4W F 100K -AT-
                                                            R219,224
      4256041003
      4256041302
                       RES-PR MF 1/4W F 13K -AT-
                                                            R315,347
                       RES-PR MF 1/4W F 16K -AT-
                                                            R325
      4256041602
                       RES-PR MF 1/4W F 16.5K -AT-
                                                            R353
      4256041652
      4256042002
                       RES-PR MF 1/4W F 20K -AT-
                                                            R351
                       RES-PR MF 1/4W F 2.2K -AT-
                                                             R312
      4256042201
      4256042801
                       RES-PR MF 1/4W F 2.8K -AT-
                                                            R259
       4256043903
                       RES-PR MF 1/4W F 390K -AT-
                                                             R234
      4256044301
                       RES-PR MF 1/4W F 4.3K -AT-
                                                             R348
                       RES-PR MF 1/4W F 56.2K -AT-
      4256045622
                                                             R223
      4256046802
                       RES-PR MF 1/4W F 68K -AT-
                                                             R235
                       RES-PR MF 1/4W F 7.5K -AT-
       4256047501
                                                             R352
      4256047502
                       RES-PR MF 1/4W F 75K -AT-
                                                             R220
      4256049530
                       RES-PR MF 1/4W F 953R -AT-
                                                             2258
       5406100000-000
                       JUMP WIRE 0.6¢
                                                             J201-209,211-215,217,218,220-222,224-231,233-258
                                                             J260-268,270,272-281,283-290,292-294,297,D328
       5406100000-000
                       JUMP WIRE 0.6¢
                                                             J201-209,211-215,217,218,220-222,224-231,233-258,
                                                             J260-268,270,272-281,283-290,292-294,297,302,D328
       1026094000
                       MOVABLE BUSHING
                                                             FOR TRS. PCB
       2007891030
                       HEAT SINK
                                                             D303
s
       4130303410
                       DIODE 3TH41 (CAP)
      3052000300
                       EYELET
                                                             0336,337
s
       4130052A20
                       DIODE RG2A2 1300V/0.5A
S
       4172010356
                       RES-MOF 2W J 10K -AT-
                                                             R328
                       RES-MOF 2W J 2R -AT-
                                                             R316,386
S
      4172020956
                       RES-MOF 2W J 2.2R -AT-
                                                             R319,390
5
       4172022956
       4172024156
                       RES-MOF 2W J 240R -AT-
                                                             R314
S
       4172047856
                       RES-MOF 2W J 0.47R -AT-
                                                             R317
                       COIL CHOKE 5.2UH -SF-
                                                             L302
       4323529003
       4490400207
                       CONN. 4P WAFER ROUND PIN
                                                             P209
       4490600034
                       CONN. 6P 5273-06 OR 3060-06
                                                             P307
       5093273595
                       CAP-PP 922 P 2KV 0.027UF +- 5%
                                                             C308
       5113224150
                       CAP-MC 0.22UFK 50V -SF-
                                                             C305
       51905625A3
                       CAP-MPP 0.0056UFJ 2KV -SF-
                                                             C309
       5193273573
                       CAP-PMH 0.027UFJ 1.6KV -SF-
                                                             C308
       5193562573
                       CAP-PMH 5600PFJ 1.6V -SF-
                                                             C309
       5195822573
                       CAP-PMHA 8200PFJ 1.6KV -SF-
                                                             C307
                       TUBE-SHRINK ID=25€
       5290025000
                                                             FOR C307
       7050206330
                       DRIVER TRANSFORMER
                                                             T301
                       CAP-MC 0.01UFK 100V -RT-
       5116103111
                                                             C306,317
       4050412155
                       RES-CF 1/4W J 120R -AT-
                                                             R3B1
                       RES-CF 1/4W J 47R -AT-
                                                             R318
       4050447055
       4120500152,
                       DIODE ZENER 14.5-15.1V -AT-
                                                             D319,320
                     ... DIODE RGP10J-5390 1A 600V -AT-
S
       413010010J
                                                             D307
       413020120A*
                       DIQUE EGP-20A -AT-
                                                             D302
       5406100000-000 JUMP WIRE 0.6¢
                                                             J301,303
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on	COMMENT	
UFFER DAUGHTER PCB A		
WIRE ASS'Y	FOR P406	
14PIN	IC401	
WAFER 2.0MM 173981-	P407	
00PFJ 50V -RT-	C493	
90PFJ 50V -RT-	C494	
UFM 16V -RT-	C495	
⊌ J 100R -AT-	R496	
W J 1K -AT-	R494,495	
W J 2K -AT-	R492,493	
FER (40x45)	FOR SYNC	

SPARE	Item Number	Description	COMMENT
S A!	M63300344-V	SPS PCB ASS'Y (SUB-2)	••••
J 74	2001291780	HEAT SINK	Q11
	3011100030	NUT ISO HEX M3 Z1NC	FOR Q11
s	4101509470	TRS. MOSFET 2SK947 TO-220	Q11
	8504113012	SCREW BIND(+) M3X12 MACH W/DIS	FOR Q11
	2046294000	HEAT SINK F	FOR Q7
S	4101164050	TRS. 2N6405 TO-220 16A/800V SC	FOR Q7
	8504113008	SCREW BIND(+) M3X8 MACH W/DISK	FOR Q7
	2004191630 2008094660	HEAT SINK HOLDER HEAT SINK	FOR Q1 FOR Q1
s	4101515730	TRS. MOSFET 2SK1573 TO-3P	Q1
•	5510135280	TUBE SI-RUBBER 13.5¢X28MM	FOR Q1
	8283113015	SCREW BIND(+) M3X15 MACH W/SPR	FOR Q1
	2007094660	HEAT SINK	FOR D30
S	41303031F4	DIODE 3A/400V 35NS 31DF4 -AT-	D30
	2001291780	HEAT SINK	D21
s	3011100030 410584551A	NUT ISO HEX M3 Z1NC TRS. MOSFET BUK455-100A TO-22	FOR D21
S	4130505400	DIODE D5LC40 ITO-220	D21
•	8504113012	SCREW BIND(+) M3X12 MACH W/DIS	FOR D21
	2007891030	HEAT SINK	FOR ICS
	3011100030	NUT ISO HEX M3 ZINC	FOR ICS
S	4159317001	IC LM317T W/MOUNTING KIT TO-22	IC6
	8504113008	SCREW BIND(+) M3X8 MACH W/DISK	FOR IC6
_	2013094660	HEAT SINK	FOR DB1
S	4130505860 8504113008	DIODE D5SB60 5A/600V SCREW BIND(+) M3X8 MACH W/DISK	DB1 FOR DB1
	C459426010	GND WIRE ASS'Y #18 GRN 180MM	GND WIRE
	C488080023	CONN. 8P & WIRE ASS'Y	FOR SK902
	1005083030	STAND TO-220 -SF-	FOR 97
S	4072033855	RES-MF 2W J 0.33R -AT-	R6
S	409502215B	RES-WW 5W J 220R SQY	R5
\$	409502735B	RES-WI 5W J 27K SQY	R43
S	4095030254 4097010354	RES-WW 5W J 3K SQM-NORMAL RES-WW 7W J 10K SQM-NORMAL	R44 R7
S S	4097015051	RES-WW 7W J 15R SQM-SF	R2
S	410030669A	TRS. 2SD669A TO-126	92
Š	41303031F2	DIODE 3A/200V 31DF2	D22,23
S	41303031F4	DIODE 3A/400V 35NS 31DF4 -AT-	D20
S	4130304311	DIODE 31DF1 -AT-	D24
S	4159384200	IC UC3842A 8PIN	IC1
s	4159435002 4159523800	POTO COUPLER X'STER 4N35 W=10 IC M5238AP	PH1 IC4
3	4320361003	COIL CHOKE 360UH -SF-	L1
	4420512004	RELAY DC12V	RELAY
	4490200207	CONN. 2P WAFER ROUND PIN 10MM	SK3
	4490300190	CONN. 3.96 3P W/O PIN 2 -SF-	SK1
S	4692300001	CLIP-FUSE 5MM	FOR F1
	5061103440	CAP-CCS 0.01UFM 400V -SF-	C5,6
	5061103440 5061103440	CAP-CCS 0.01UFM 400V -SF- CAP-CCS 0.01UFM 400V -SF-	C5,6 C5,6
	5065105425	CAP-MPR 1UFM 250V -SF-	C1
	5065474425	CAP-MPR 0.47UFM 250V -SF-	C2
	5074104101	CAP-MEF 0.1UFK 100V -SF-	C11
	5074104104	CAP-MEF 0.1UFK 400V -SF-	C22,43
	5074224101	CAP-MEF 0.22UFK 100V -SF-	C48,49
	5101471193	CAP-CCB 470PFK 3KV -SF-	C9
	515A331S50 515A470S02	CAP-EC +-20% 330UF/50V -SF- CAP-EC +-20% 47UF/160V -SF-	C32 C30
	515A471S35	CAP-EC +-20% 470UF/35V -SF-	C8
	515F101S01	CAP-ECF 100UFM 100V -SF-	C91
	515F331S01	CAP-ECF 330UFM 100V -SF-	C31
	515F471S25	CAP-ECF 470UFM 25V -SF-	C33,34
	515L331S04	CAP-ECL 330UFM 400V -SF-	C7
	515X221S07 515X331S50	CAP-ECX 220UFM 200V -SF- CAP-ECX 330UFM 50V -SF-	C47 C32
	515X331830 515X471835	CAP-ECX 470UFM 35V -SF-	C8
	5225150210	POT(CERMET) 0.3W 5K 6¢ LAY-DOW	VR1
s	5268400052	FUSE 4A/250VAC	F1
	7021134091	PTCR PTH451C262BF140M270	PTCR1
	7050106330	POWER TRANSFORMER	Т2
_	7066330253	CHOKE COMMON MODE	T1
S	410112907A	TRS. 2N2907A TRS. 2SB561 TO-92 -RT-	018 07.4
s s	4110105610 411022120Y	TRS. 258301 10-92 -R1-	93,6 95,20
S	4114422220	TRS. PH2222 TO-92 -RT-	017
s	4114501006	TRS. MCR100-6 TO-92 -RT-	94

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TRS. LSCR100-6B TO-92 -RT-
S
      411451006B
      4114510080
                      TRS. SCR MCR100-8 TO-92 -RT-
                                                            019
S
                       IC TL431 REGULATOR TO-92 -RT-
S
      415943100A
                                                            IC3
                      CAP-MEF 0.0047UFJ 50V -SF-
                                                            C13
      5074472505
                      CAP-CCB 1000PFK 1KV -RT-
                                                            C38
      5101102132
                      CAP-CCB 1000PFK 50V -RT-
      5101102152
                                                            C17
      5101121152
                       CAP-CCB 120PFK 50V -RT-
                                                            C10,14
                      CAP-CCB 330PFK 50V -RT-
      5101331152
                                                            C50
                       CAP-CCB 680PFK 50V -RT-
      5101681152
                                                            C46.51
                      CAP-MC 0.0047UFK 100V -RT-
                                                            C15
      5116472111
      5134104452
                      CAP-SCF 0.1UFZ 50V -RT-
                                                            C37
      515A100T01
                      CAP-EC +-20% 10UF/100V -RT-
                                                            C20
      515A100T25
                      CAP-EC +-20% 10UF/25V -RT-
                                                            C45
      515A101T10
                       CAP-EC +-20% 100UF/10V -RT-
                                                            C16
                      CAP-EC +- 20% 22UF/25V -RT-
      515A220T25
                                                            C21
      515A339T50
                       CAP-EC +-20% 3.3UF/50V -RT-
                                                            C3
                       CAP-EC +-20% 47UF/10V -RT-
                                                            C12
      515A470T10
                       CAP-ECX 10UFM 100V -RT-
      515X100T01
                                                            C20
                      CAP-ECX 10UFM 25V -RT-
      515X100T25
                                                            C45
                       CAP-ECX 10UFM 50V -RT-
      515X100T50
                                                            C19
      515X101T10
                       CAP-ECX 100UFM 10V -RT-
                                                            C16
                       CAP-ECX 22UFM 25V -RT-
      515x220T25
                                                            C21
                       CAP-ECX 3.3UFM 50V -RT-
                                                            C3
      515X339T50
      515X339T50
                       CAP-ECX 3.3UFM 50V -RT-
                                                            CS3
                       CAP-ECX 47UFM 10V -RT-
      515x470T10
                                                            C12
      5156479T50
                      CAP-EC6 4.7UFM 50V -RT-
                                                            C18
      4050151055
                       RES-CF 1/2W J 51R -AT- SMALL
                                                            R47
      4050247455
                       RES-CF 1/2W J 470K -AT-
                                                            21
      4050410155
                       RES-CF 1/4W J 100R -AT-
                                                            R21,25,35,37,38
                       RES-CF 1/4W J 1K -AT-
                                                            R20,48,57,66,70,78
      4050410255
                       RES-CF 1/4W J 10K -AT-
      4050410355
                                                            R27,58,85
                       RES-CF 1/4W J 100K -AT-
                                                            R36
      4050410455
                       RES-CF 1/4W J 1M -AT-
                                                            R65.97
s
      4050410555
                       RES-CF 1/4W J 11K -AT-
      4050411355
                                                            R31
      4050412155
                       RES-CF 1/4W J 120R -AT-
                                                            R24
                       RES-CF 1/4W J 15K -AT-
      4050415355
                                                            R26,29,46
      4050418055
                       RES-CF 1/4W J 18R -AT-
                                                            R9
      4050420155
                       RES-CF 1/4W J 200R -AT-
                                                            R23,79
      4050420255
                       RES-CF 1/4W J 2K -AT-
                                                            R10,33
                       RES-CF 1/4W J 20K -AT-
      4050420355
                                                            R15
                       RES-CF 1/4W J 2.2K -AT-
      4050422255
                                                            R68
      4050424055
                       RES-CF 1/4W J 24R -AT-
                                                            R8
      4050424355
                       RES-CF 1/4W J 24K -AT-
                                                            R45,76
      4050427255
                       RES-CF 1/4W J 2.7K -AT-
                                                            R13
      4050430255
                       RES-CF 1/4W J 3K -AT-
                                                            R30,34,69,71,96
      4050430355
                       RES-CF 1/4W J 30K -AT-
                                                            R62
      4050433455
                       RES-CF 1/4W J 330K -AT-
                                                            R84
                       RES-CF 1/4W J 36K -AT-
      4050436355
                                                            R95
                       RES-CF 1/4W J 39K -AT-
      4050439355
                                                            R92
                       RES-CF 1/4W J 470R -AT-
      4050447155
                                                            R77
      4050447255
                       RES-CF 1/4W J 4.7K -AT-
                                                            R63,67
                       RES-CF 1/4W J 47K -AT-
      4050447355
                                                            R75
      4050451055
                       RES-CF 1/4W J 51R -AT-
                                                            R11
      4050451255
                       RES-CF 1/4W J 5.1K -AT-
                                                            R18, 19, 32
                       RES-CF 1/4W J 560K -AT-
      4050456455
                                                            R39,40
                       RES-CF 1/4W J 620R -AT-
      4050462155
                                                            R49
      4050462955
                       RES-CF 1/4W J 6.2R -AT-
                                                            R12
                       RES-CF 1/4W J 750R -AT-
      4050475155
                                                            R41
                       RES-CF 1/4W J 8.2K -AT-
      4050482255
                                                            R28
      4050482455
                       RES-CF 1/4W J 820K -AT-
                                                            R82
                       RES-CF 1/4W J 91K -AT-
      4050491355
                                                            R17
                       RES-CF 1W J 470K -AT-
      4051047455
                                                            R4
                       RES-MF 1W J 0.22R -AT-
                                                            R3,56
      4071022855
      4120104001
                       DIODE 1N4001 -AT-
S
                                                            D4,29
S
      4120146060
                       DIODE 1N4606 (SI) -AT-
                                                            D5-9,11-13,16,17,19,26,31
S
      4120500162
                       DIODE ZENER 16V HZ-16-2 -AT-
                                                            21,5
      4120500563
                       DIODE ZENER RD5.6EB1 -AT-
S
                                                            Z6
      4120501802
                       DIODE ZENER HZ18-2 V -AT-
                                                            Z2,3
      412055279B
                       DIODE ZENER 1N5279BRL
S
                                                            74
$
      413010001B
                       DIODE FE18-5390 1A 100V -AT-
                                                            D15
      413010001D
                       DIODE FE10-5390
                                                            02,3,34
S
      4130101102
                       DIODE 11DF2 -AT-
                                                            D2,3,34
                       DIODE BYV26C KINK FORMING -AT-
S
      413010426C
                                                            D25
      413010426D
                       DIODE 1A/800V BYV26D
S
                                                            D1,28
      4130201100
                       DIODE EGP100 -AT-
S
                                                            02,3,34
      4160447555
                       RES-MG 1/4W J 4.7M -AT-
                                                            R14
                       RES-MOF 1W J 10R -AT-
      4171010056
                                                            R81
      4171013953
                       RES-MOF 1W J 1.3R -SF-
                                                            R87
                       RES-PR MF 1/4W F 10K -AT-
      4256041002
                                                            R16
      4256041101
                       RES-PR MF 1/4W F 1.1K -AT-
                                                            R94
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4256041913	RES-PR MF 1/4W F 191K -AT-	R72
4256043301	RES-PR MF 1/4W F 3.3K -AT-	R74
4256044322	RES-PR MF 1/4W F 43.2K -AT-	R73
4256049091	RES-PR MF 1/4W F 9.09K -AT-	R86
4321150006	COIL PEAKING 15UH -AT-	L3
4322209046	FERRITE BEAD 2UH -AT-	L2
5406100000-000	JUMP WIRE 0.6¢	J1-25,27-36,38,40
		FND

- 25 -

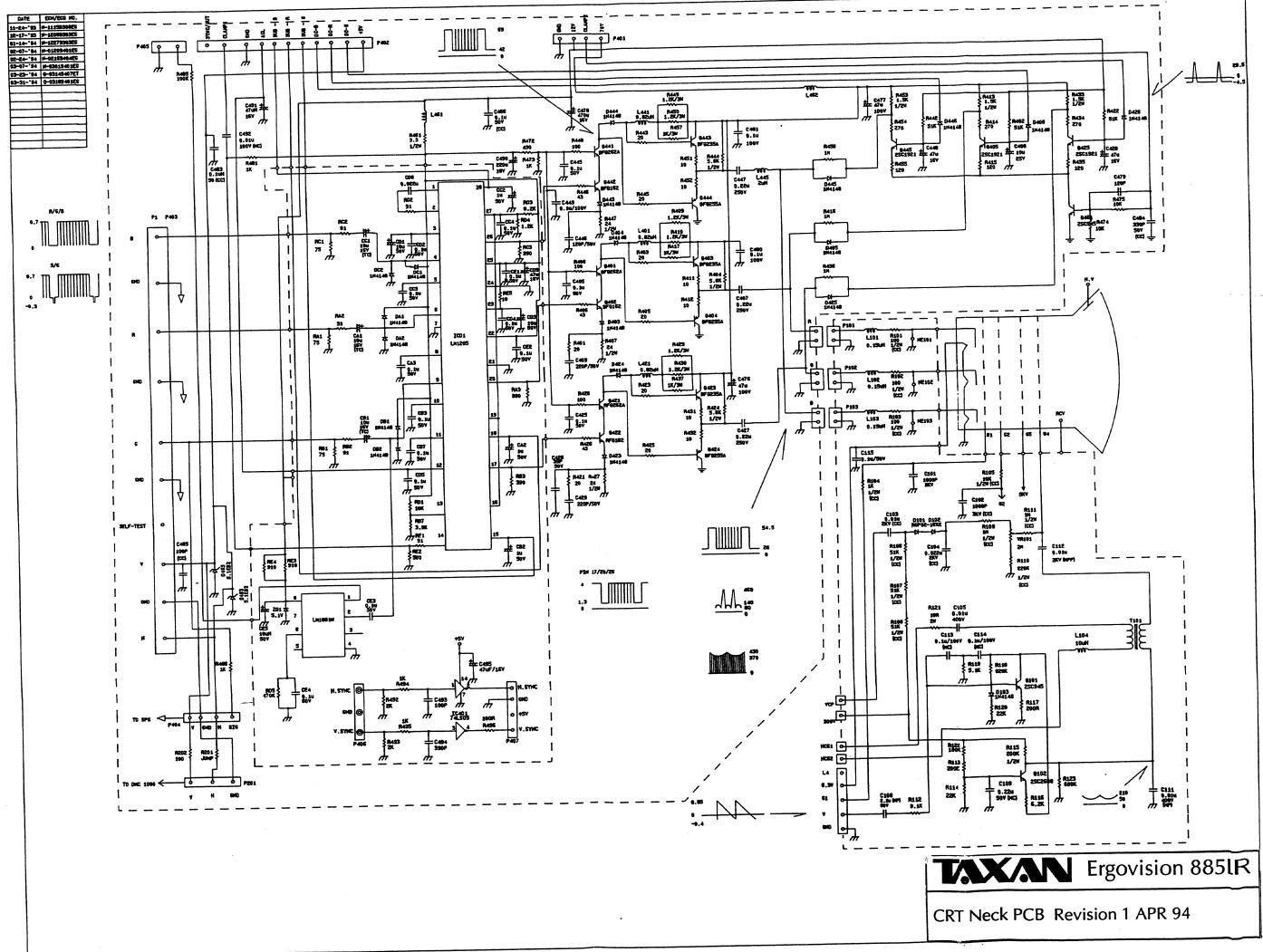
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S	SS63320130-404	LOGIC PCB ASS'Y	
	4010110152	RES-CHIP 1/10W J 100R 0805	R822
	4010110252	RES-CHIP 1/10W J 1K 0805	R852
	4010120252	RES-CHIP 1/10W J 2K 0805	R840
	4010120352	RES-CHIP 1/10W J 20K 0805	R801-808
	4010122952	RES-CHIP 1/10W J 2.2R 0805	R853,854
	4010124252	RES-CHIP 1/10W J 2.4K 0805	R824
	4010139252	RES-CHIP 1/10W J 3.9K 0805	R820,831
	4010147252	RES-CHIP 1/10W J 4.7K 0805	R809-816
	4010156252	RES-CHIP 1/10W J 5.6K 0805	R830
	4050216055	RES-CF 1/2W J 16R -AT-	R855
	4050400055	RES-CF 1/4W J OR -AT-	L801,R821
S	411010647C	TRS. 2SB647C TO-92M -RT-	Q854
S	411030667C	TRS. 2SD667C TO-92M -RT-	Q853
S	412014148T	DIODE 1N4148 (BAS32L) MLF SMD	D810-814
S	4141101502	P.C.B. DMC1000	
S	415574574T	IC 74HC574 SMD CHIP 20PIN	IC810
S	4159100001	IC DMC 1000 PLCC REV:G	IC801
S	4159241600	IC 24C16 (SOIC) 8PIN	IC802
S	4159241640	IC X24164 (SOIC) 8PIN	IC803
Ş	4159358000	IC LM358 8PIN	IC811
	4159633012	FIRMUARE 6330GR12 REV12	
	419A110022	RES-CHIP 1/10W F 10K 0805 -AT-	R843,850,851
	419A120022	RES-CHIP 1/10W F 20K 0805 -AT-	R842
	419A124912	RES-CHIP 1/10W F 2.49K 0805 -A	R845
	419A140222	RES-CHIP 1/10W F 40.2K 0805 -A	R841
	419A149912	RES-CHIP 1/10W F 4.99K 0805 -A	R844
	4321109006	COIL PEAKING 1UH -AT-	L803
	4490200130	CONN. 2P WAFER 2.5MM	P812
	4490400130	CONN. 4P WAFER (BXB-XH-A) P221	P813
	4491400220	CONN. 14P 52044-1410	CNP801
	5121101552	CAP-CCCH 100PFJ 50V -RT-	C819
	5156101T10	CAP-EC6 100UFM 10V -RT-	C816
	5156470T16	CAP-EC6 47UFM 16V -RT-	C815
	5176229L16	CAP-TC 2.2UFK 16V CHIP 3528	C801
	7145102456	CAP-X7R 0.001UFZ 50V CHIP 1206	C809
	7145473156	CAP-X7R 0.047UFK 50V CHIP 1206	C804
	7147104456	CAP-CC +80%-20% 0.1UF/50V CHIP	C803,805-807,850,851
	7154000000	CRYSTAL 4.00MHZ	RC801
	7185101116	CAP-CC +-10% 100PF/100 CHIP	C808,814
			END

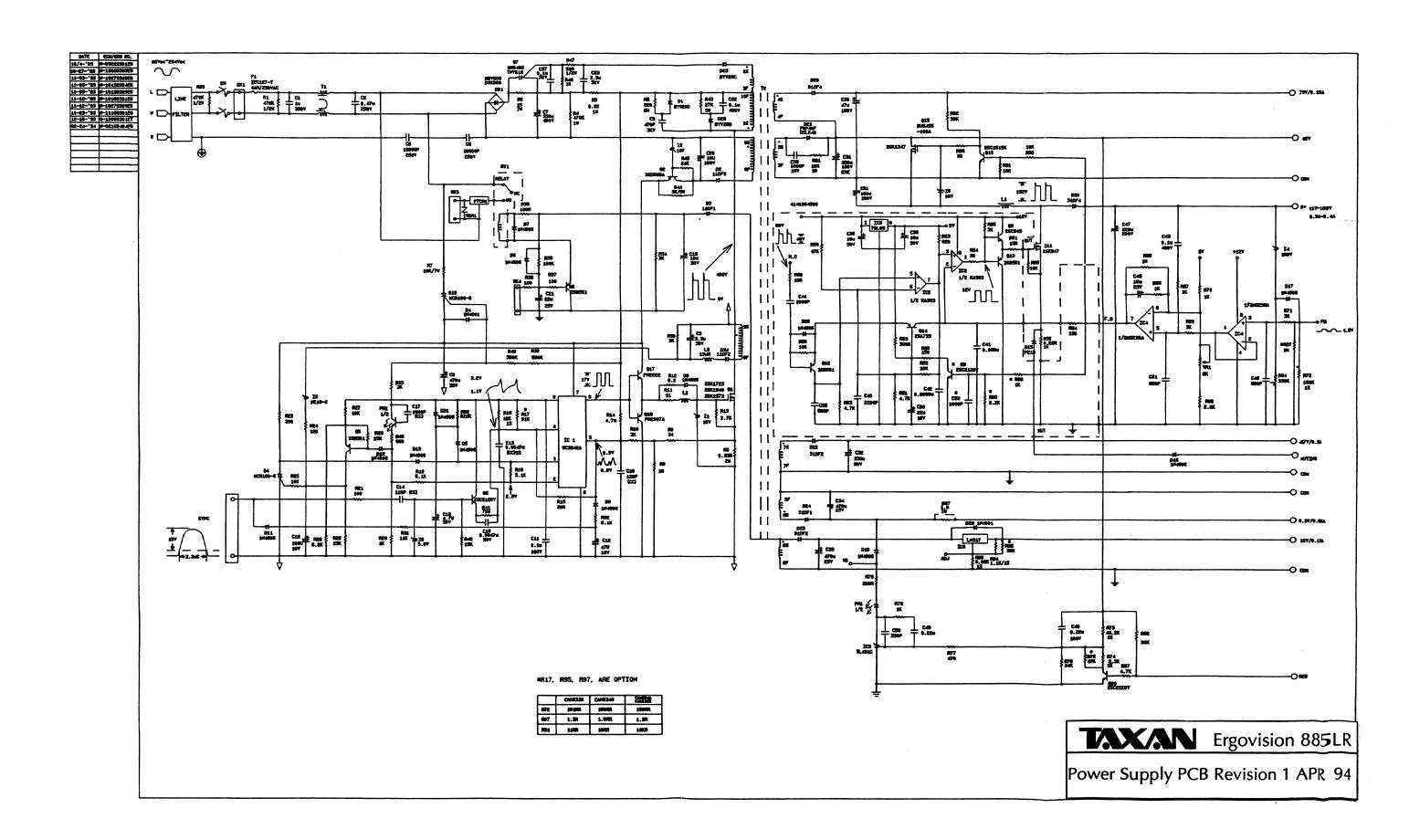
SPAI	RE Item Number	Description	COMMENT
 S	AH67000944-V	H-PRO DAUGHTER PCB ASS'Y (SUB-	
•	4490500203	CONN. 5P R/A WAFER HB02051	
S	411020945P	TRS. 2SC945P TO-92 -RT-	Q335
	5156101T16	CAP-EC6 100UFM 16V -RT-	C352
	4050410255	RES-CF 1/4W J 1K -AT-	R379
	4050415155	RES-CF 1/4W J 150R -AT-	R388
	4050447255	RES-CF 1/4W J 4.7K -AT-	R387
S	4120141480	DIODE 1N4148 (SI) -AT-	D338,339,347
S	41205009C1	DIODE ZENER HZ9C1 -AT-	D346
S	4141103100	P.C.B DELAY 26X27	

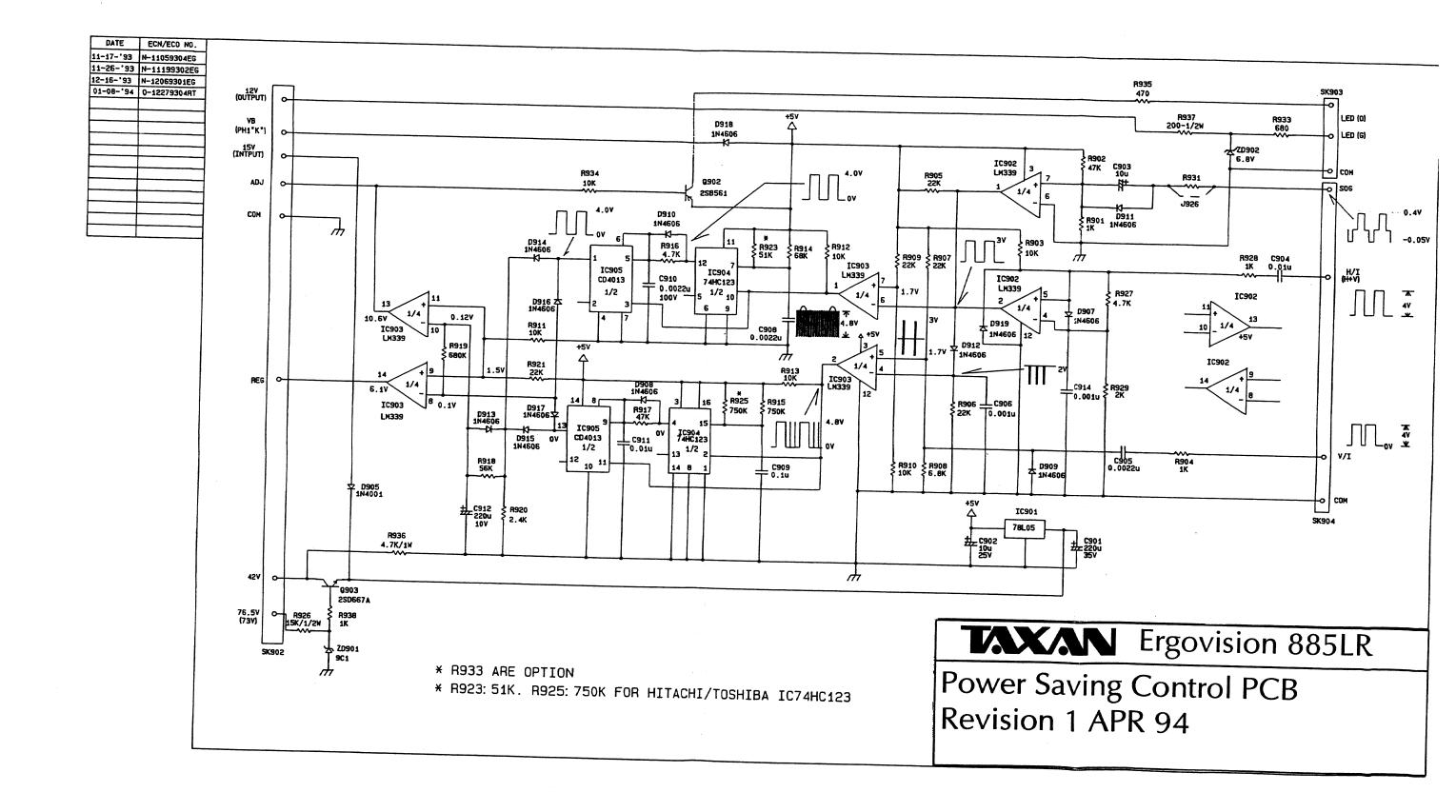
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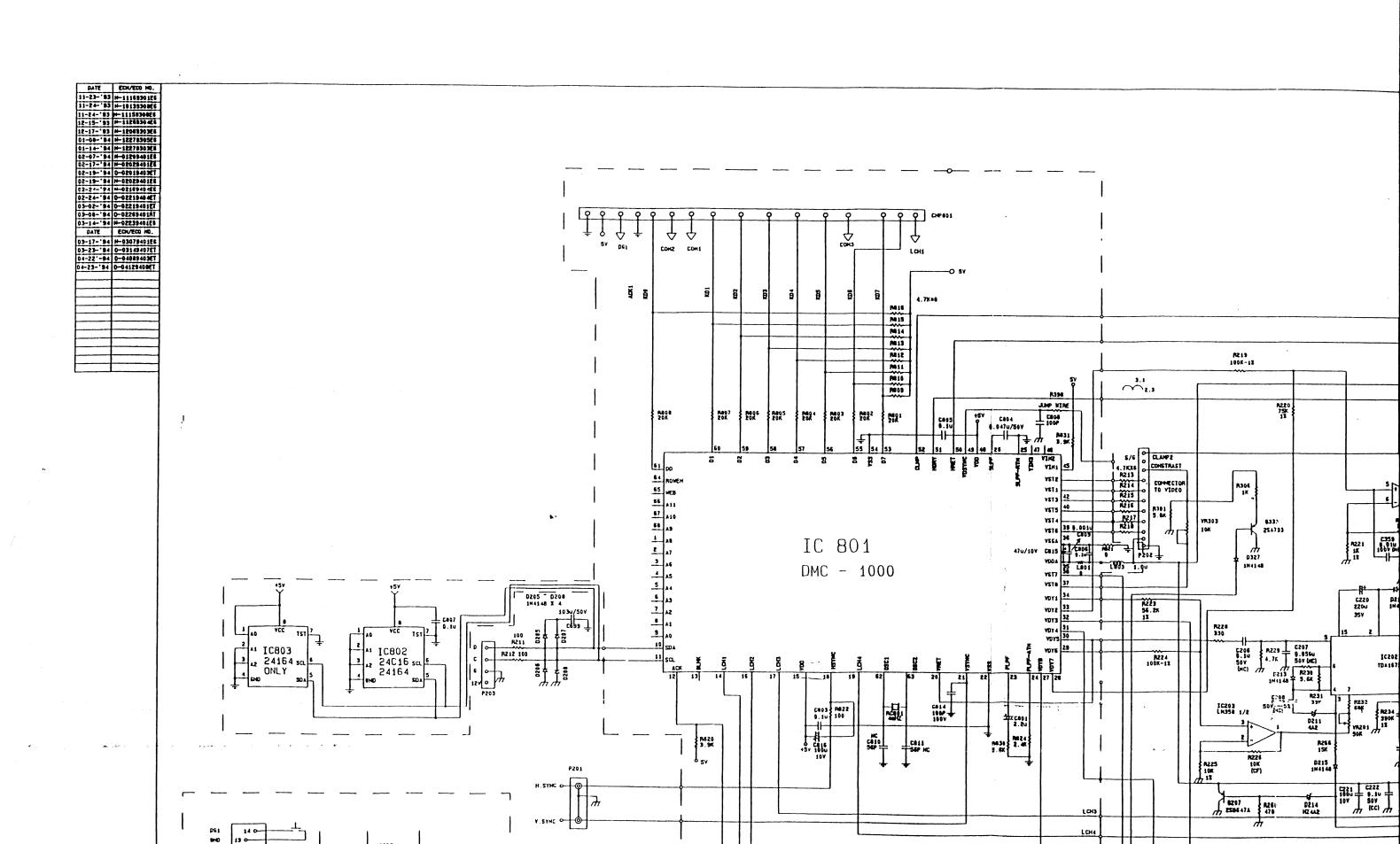
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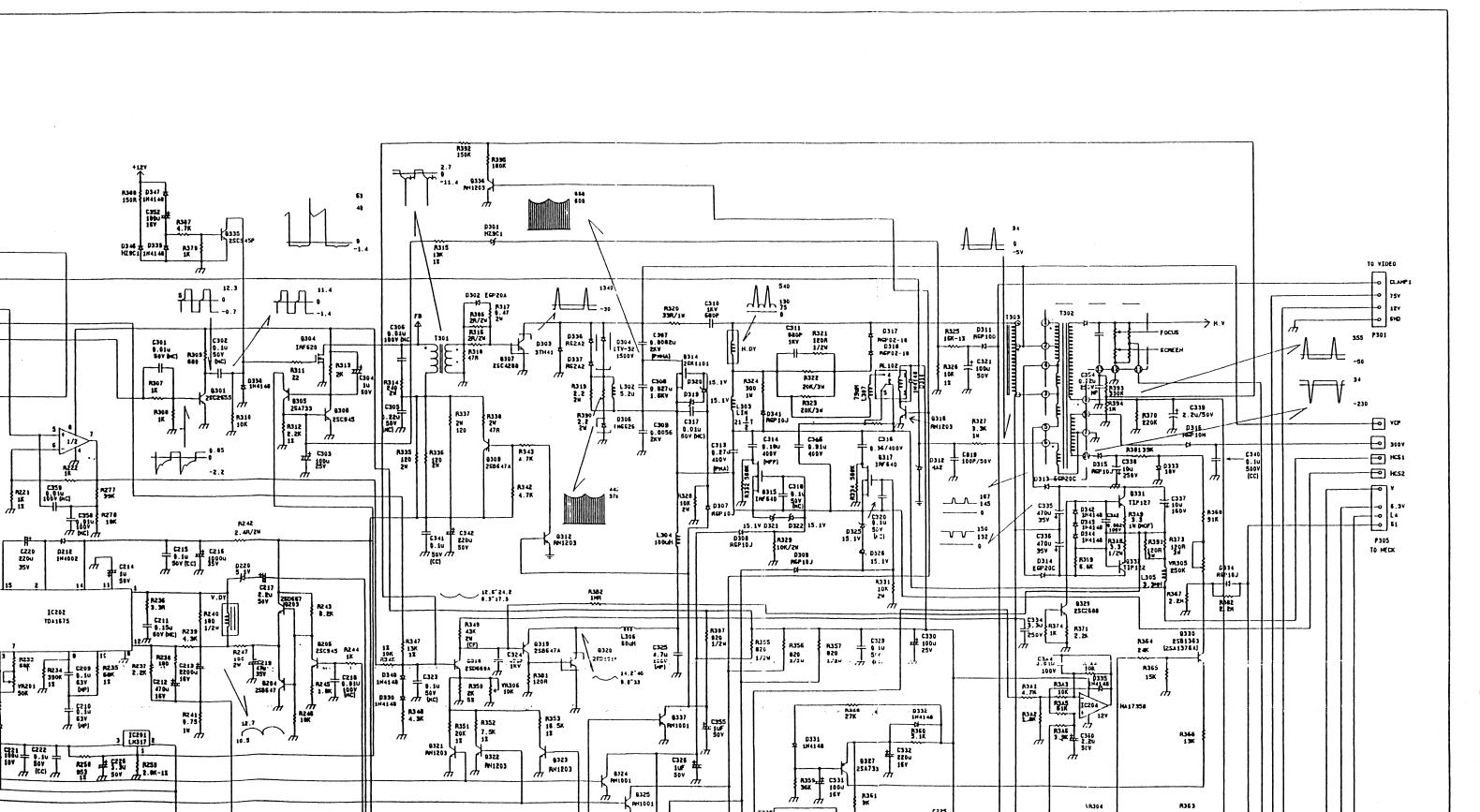
63300442-V		
	DAUGHTER-1 PCB ASS'Y (SUB-1)	
411021515K	TRS. 2SC1515K TO-92 -RT-	Q16
4159393000	IC LM393 14PIN	IC2
	CONN. 15P HB02151 R/A	SK5
	TRS. 2SA733 TO-92M -RT-	Q14
4110105610	TRS. 2SB561 TO-92 -RT-	Q12,13
411020945P	TRS. KSC945CG TO-92 -RT-	Q8
	TRS. 2SC2120Y TO-92 -RT-	Q9
415978L05A	IC MC78L05ACZ 3PIN	ICS
5101102152	CAP-CCB 1000PFK 50V -RT-	C52
5101681152	CAP-CCB 680PFK 50V -RT-	c3 5
5116102111	CAP-MC 0.001UFK 100V -RT-	C44
5116222111	CAP-MC 0.0022UFK 100V -RT-	C40
5116682111	CAP-MC 6800PFK 100V -RT-	C42
5116683150	CAP-MC 0.068UFK 50V -RT-	C41
515X100T50	CAP-ECX 10UFH 50V -RT-	C36,39
5156220T25	CAP-EC6 22UFM 25V -RT-	C90
4050410255	RES-CF 1/4W J 1K -AT-	R88
4050410355	RES-CF 1/4W J 10K -AT-	R52,60,90,91
4050415055	RES-CF 1/4W J 15R -AT-	R61
4050415155	RES-CF 1/4W J 150R -AT-	R59,64
4050422255	RES-CF 1/4W J 2.2K -AT-	R89
4050430055	RES-CF 1/4W J 30R -AT-	R54
4050430255	RES-CF 1/4W J 3K -AT-	R55
4050430455	RES-CF 1/4W J 300K -AT-	R93
4050447255	RES-CF 1/4W J 4.7K -AT-	R51
4050447355	RES-CF 1/4W J 47K -AT-	R50
4050462155	RES-CF 1/4W J 620R -AT-	R53
4141094501	P.C.B. DC-DC CONVERTER	
5406100000-000	JUMP WIRE 0.6¢	J90,91,93
	4491500203 4110007330 4110105610 411020945P 411022120Y 415978L05A 5101102152 5101681152 5116102111 5116682111 5116682111 5116683150 515X100750 5156220725 4050410255 4050410255 4050415155 405045055 4050430055 4050430055 4050430455 4050447255 4050447255 4050447355 4050447355 4050462155 4141094501	4491500203 CONN. 15P HB02151 R/A 4110007330 TRS. 2SA733 TO-92M -RT- 4110105610 TRS. 2SB561 TO-92 -RT- 411020945P TRS. KSC945CG TO-92 -RT- 411022120Y TRS. 2SC2120Y TO-92 -RT- 415978L05A IC MC78L05ACZ 3PIN 5101102152 CAP-CCB 1000PFK 50V -RT- 5101681152 CAP-CCB 680PFK 50V -RT- 5116102111 CAP-MC 0.001UFK 100V -RT- 5116682111 CAP-MC 0.0022UFK 100V -RT- 5116683150 CAP-MC 0.068UFK 50V -RT- 5156220T25 CAP-ECX 10UFM 50V -RT- 5156220T25 CAP-ECX 10UFM 50V -RT- 4050410255 RES-CF 1/4W J 1K -AT- 4050415155 RES-CF 1/4W J 15R -AT- 4050430055 RES-CF 1/4W J 15R -AT- 4050430055 RES-CF 1/4W J 30R -AT- 4050430255 RES-CF 1/4W J 30R -AT- 4050447255 RES-CF 1/4W J 47K -AT- 4050447355 RES-CF 1/4W J 47K -AT- 4050462155 RES-CF 1/4W J 47K -AT- 4050462155 RES-CF 1/4W J 620R -AT-

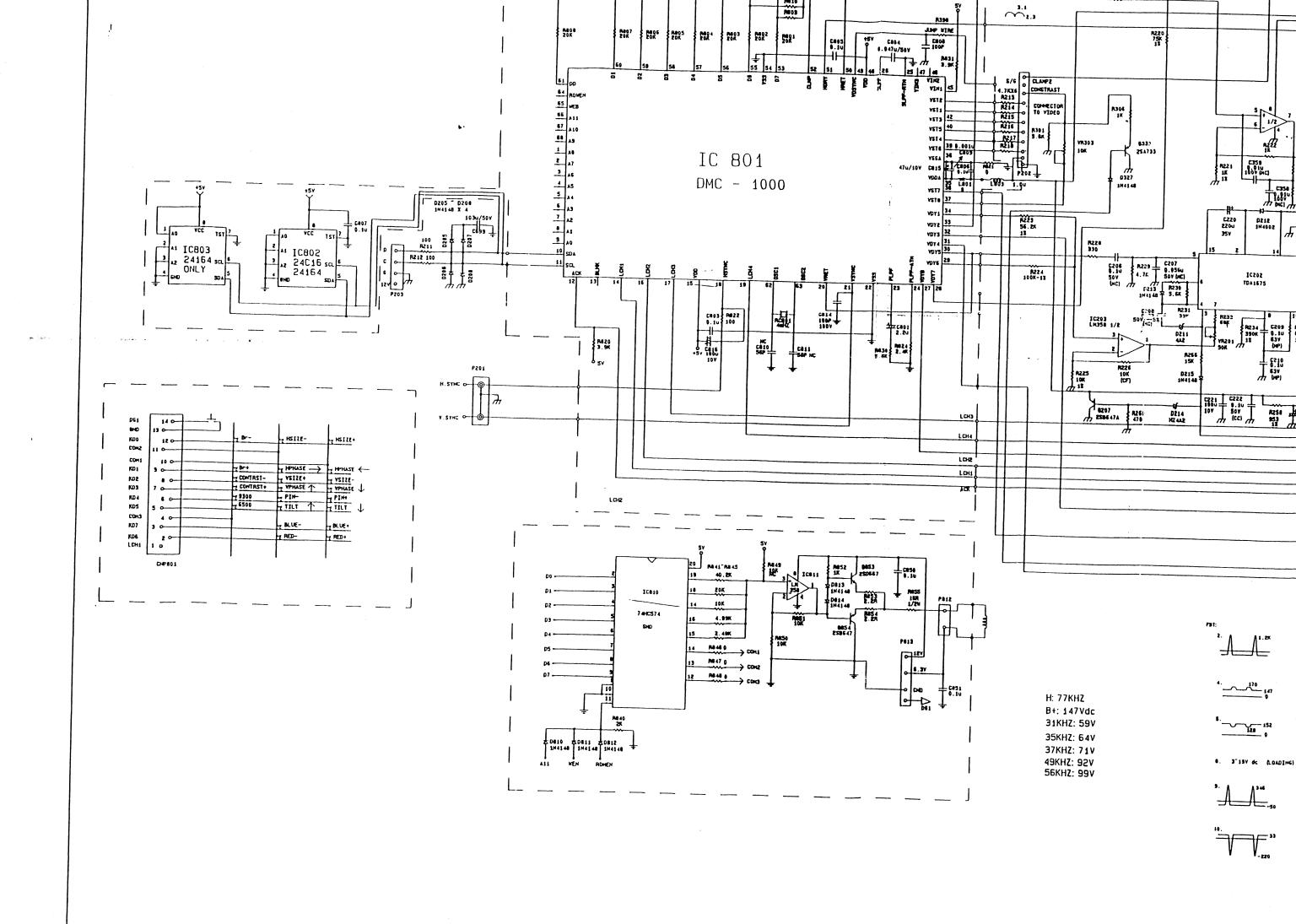


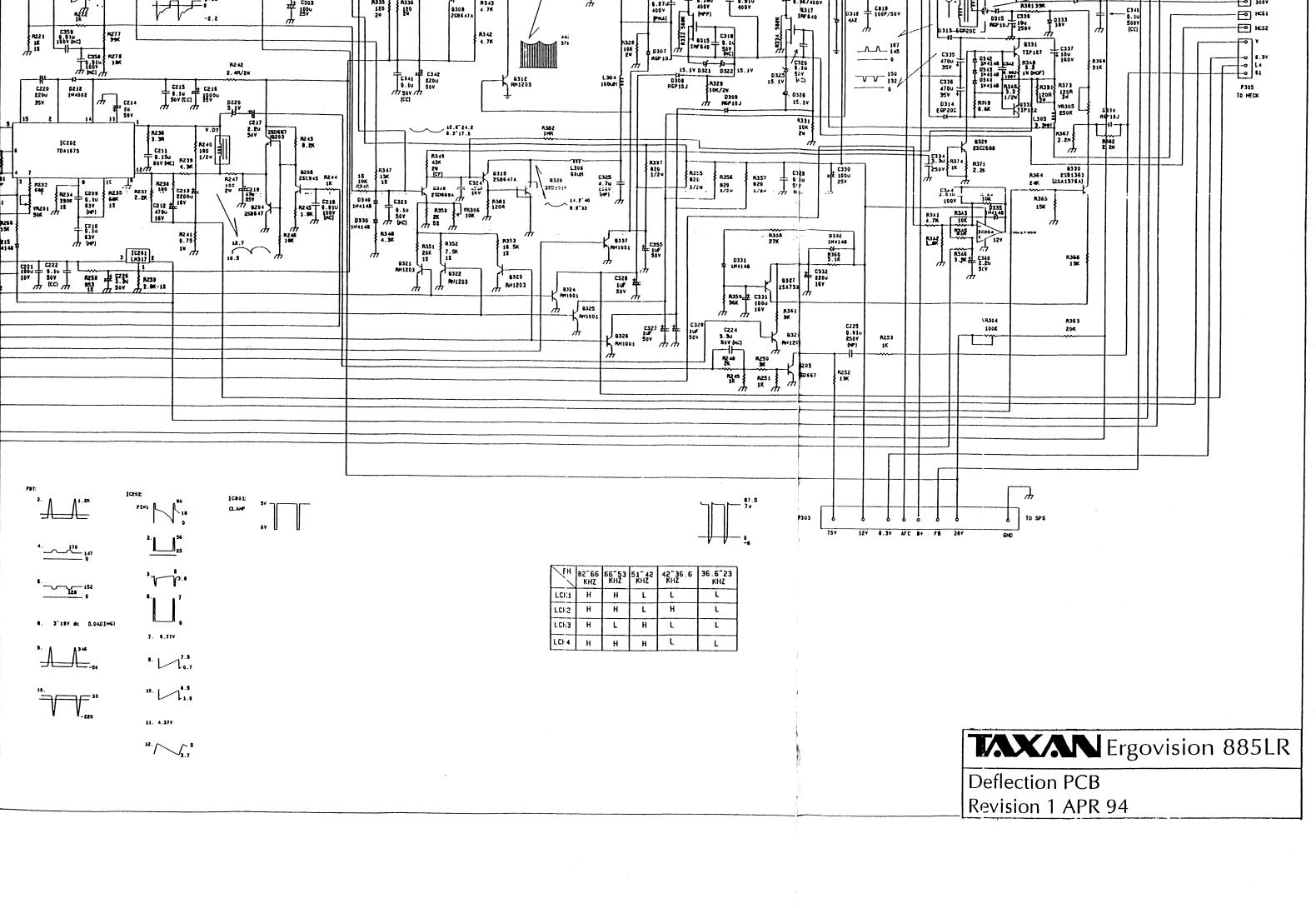


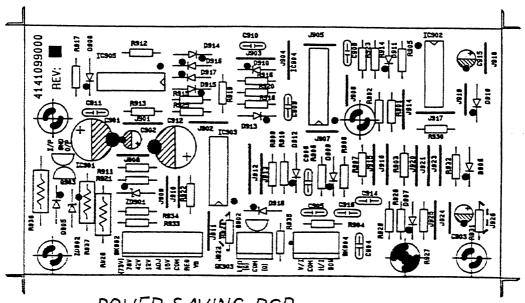




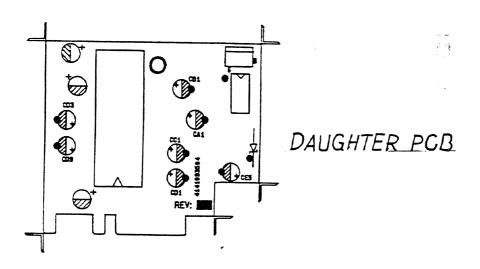


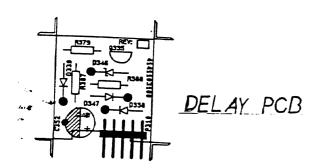


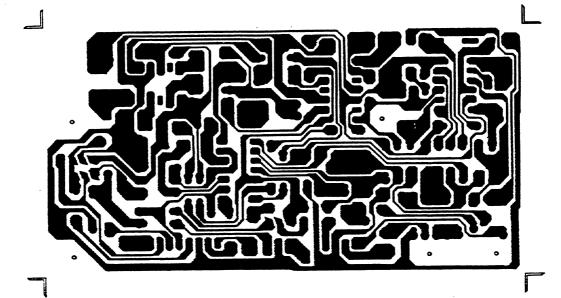


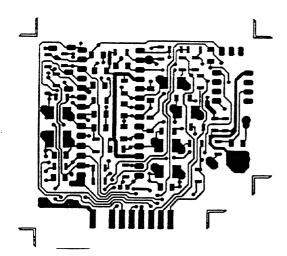


POWER SAVING PCB

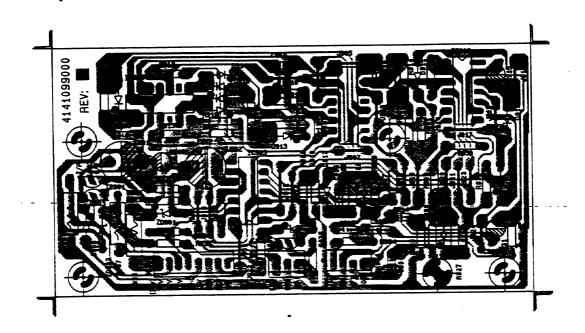


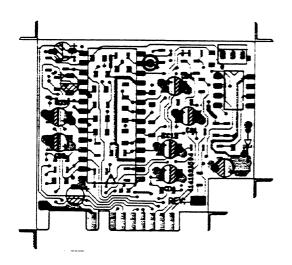


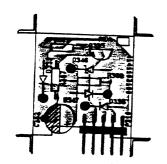


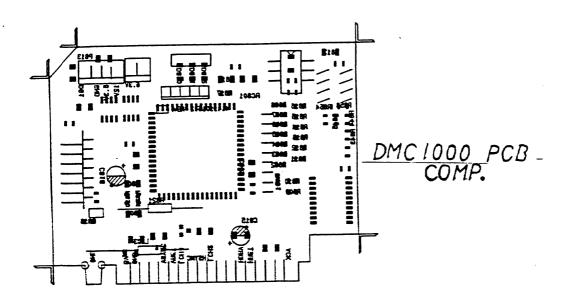


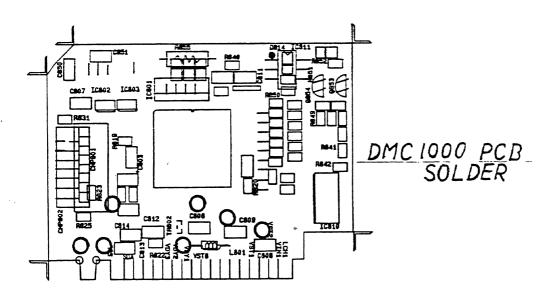


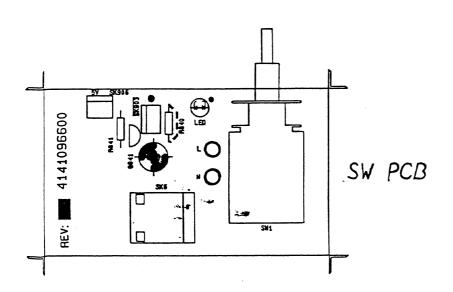


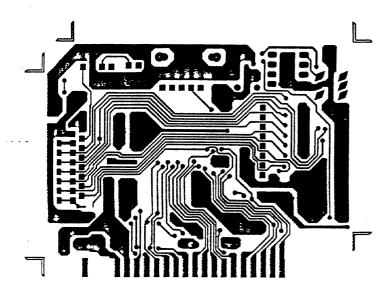


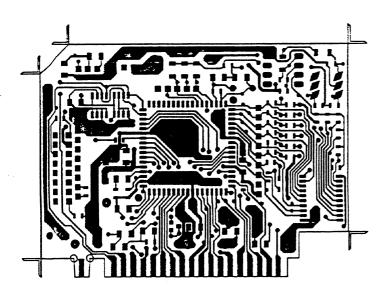


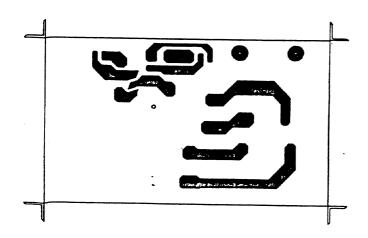


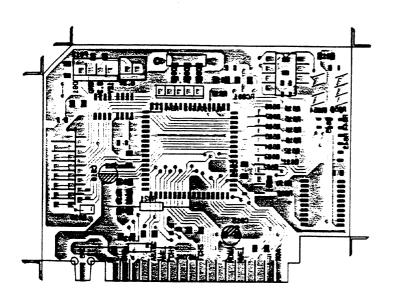


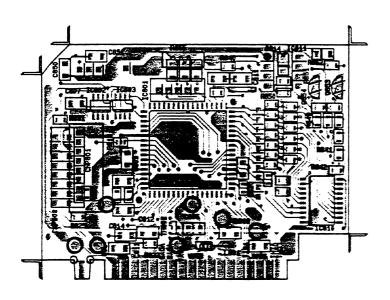


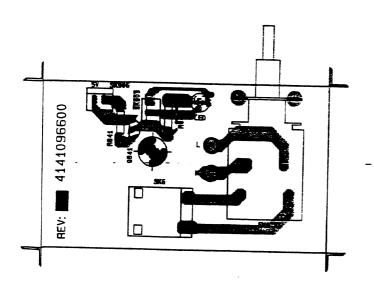


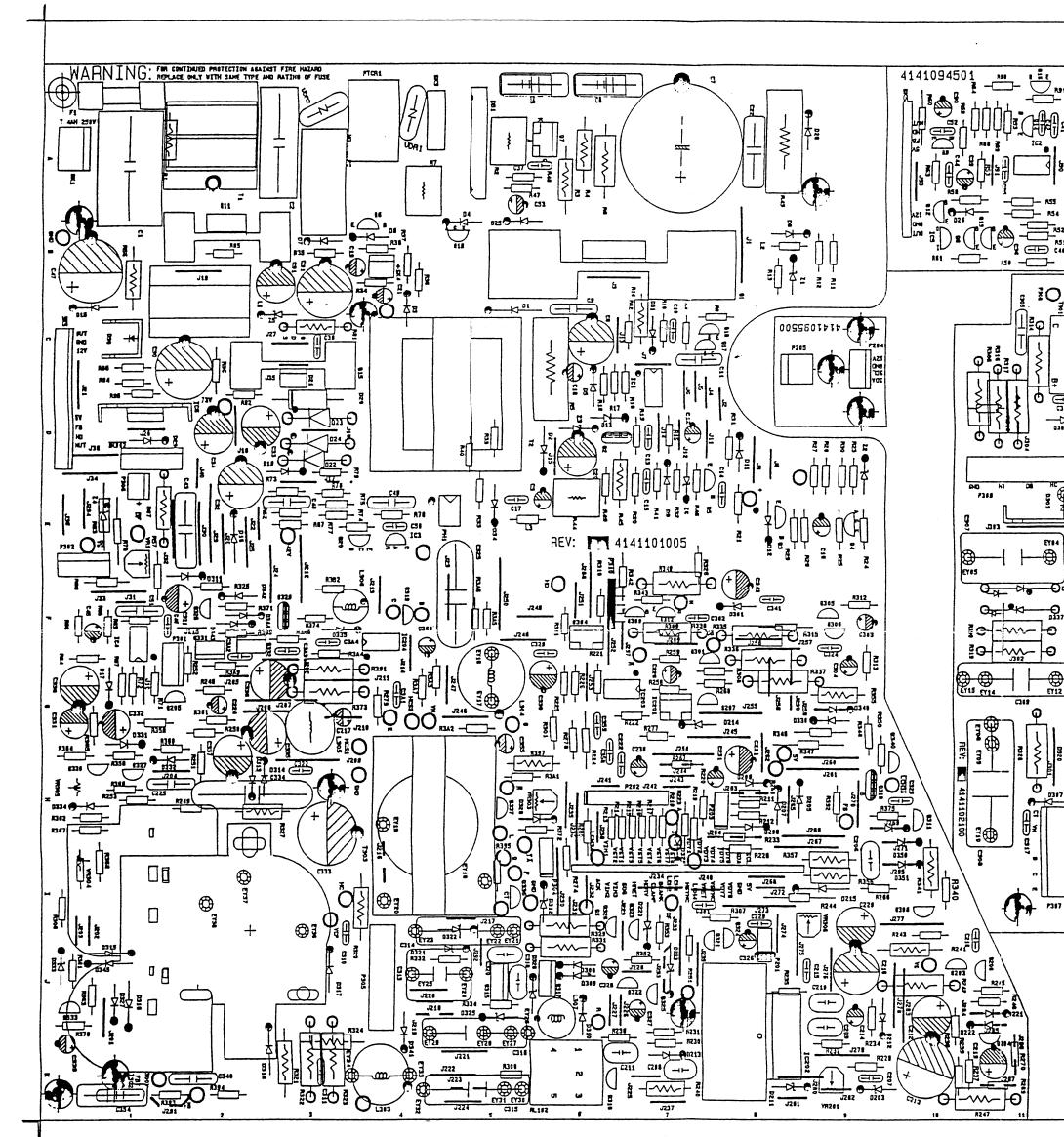












4141101005

MAIN PCB

4141095500

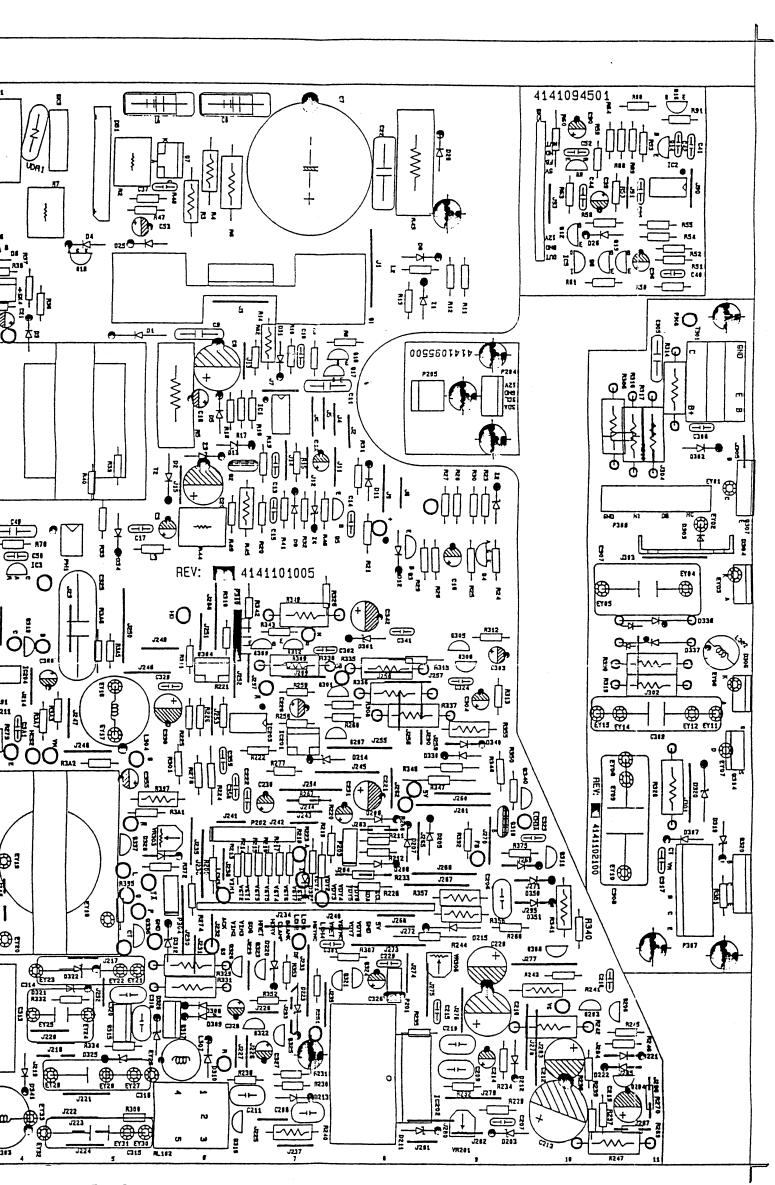
I2C PCB

4141094501

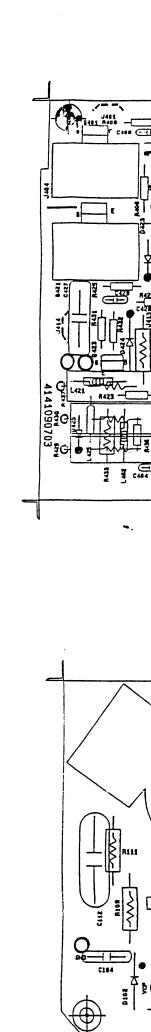
DC-DC CONVERTER PCB

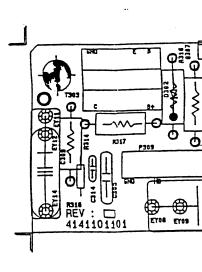
4141102100

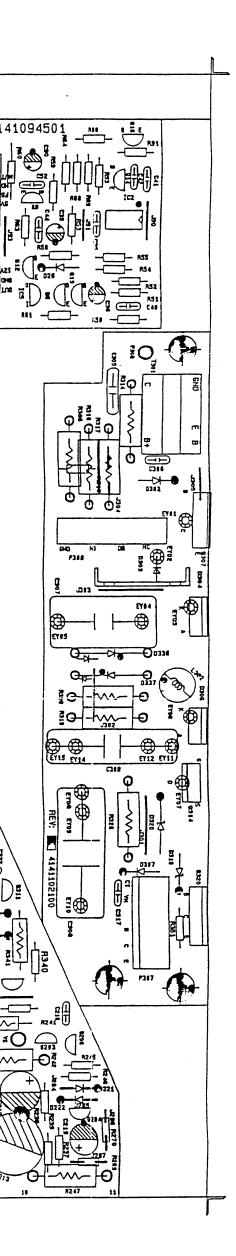
UNUSED

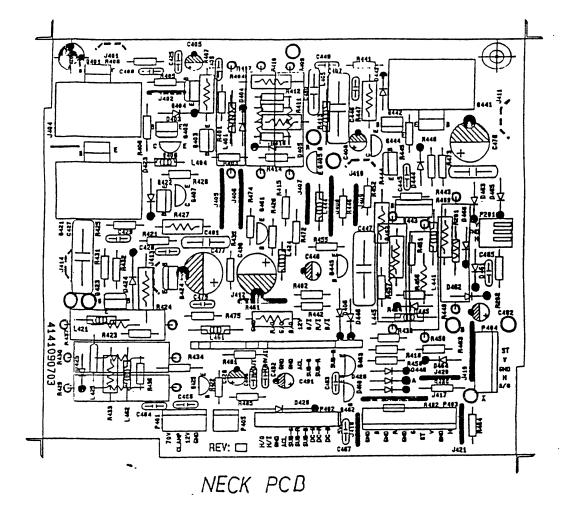


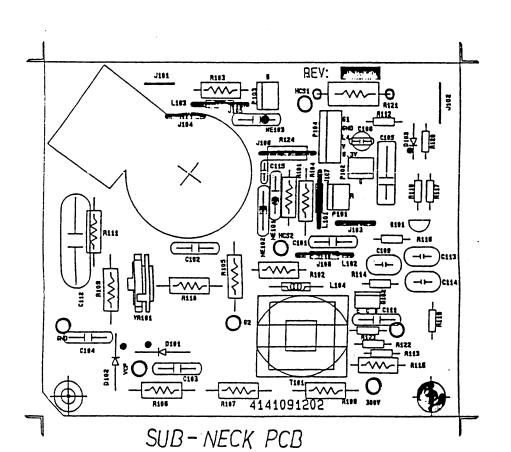
MAIN PCB
12C PCB
DC-DC CONVERTER PCB
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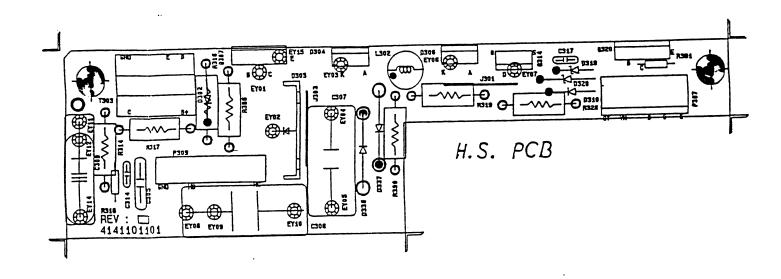


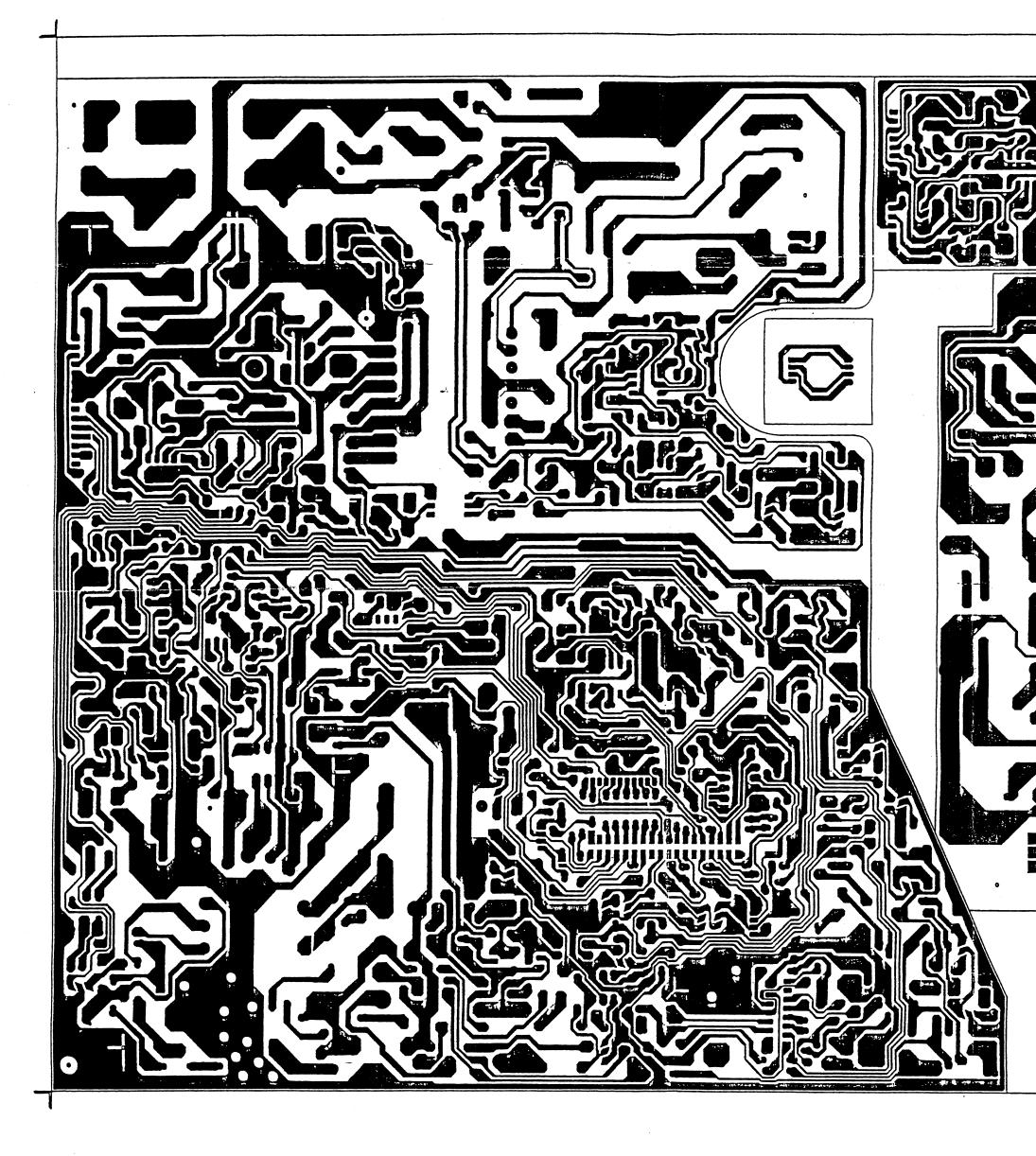


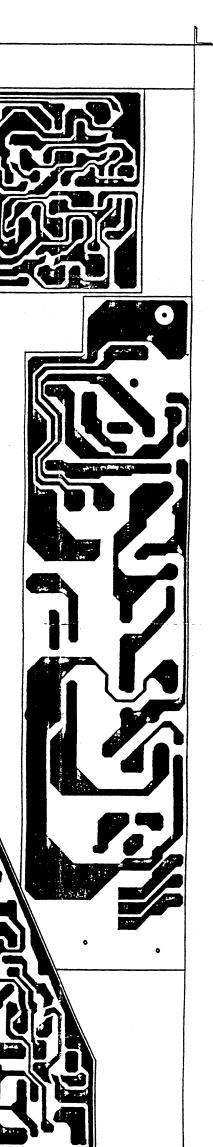


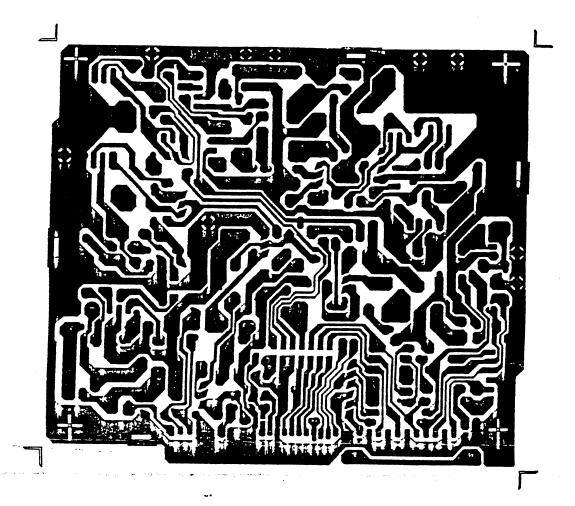


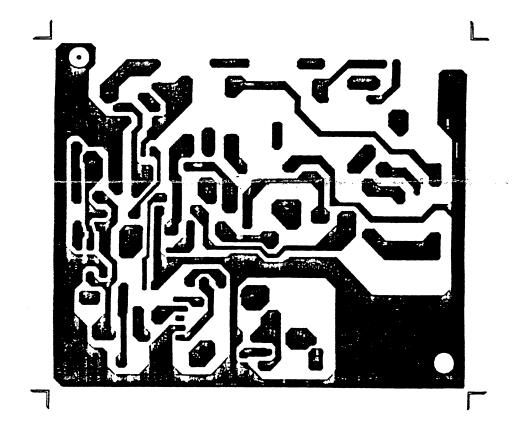


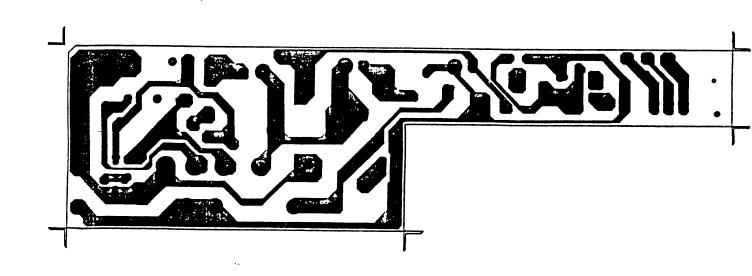






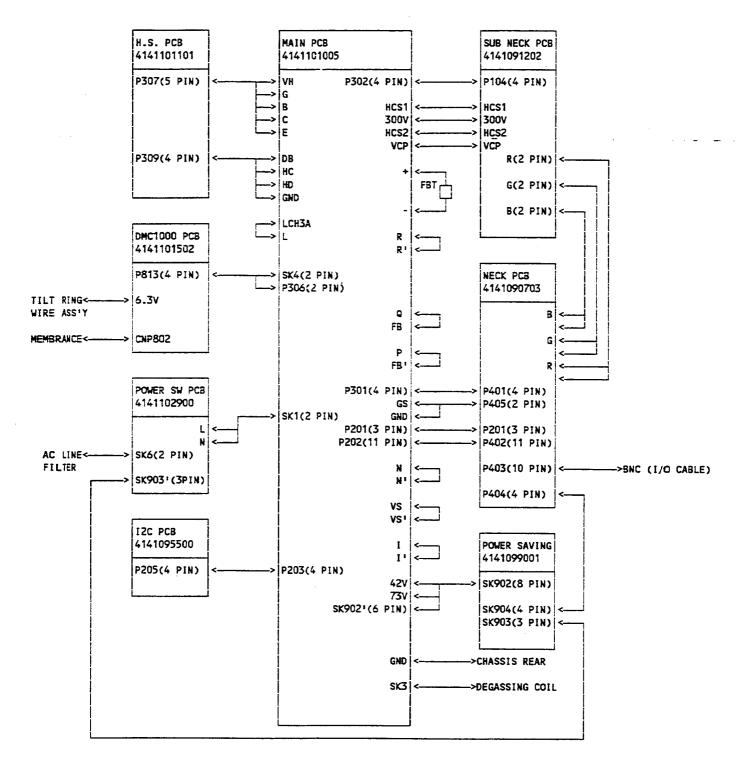




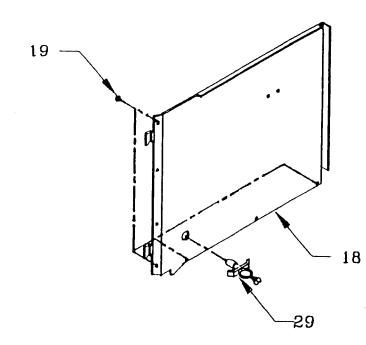


Inter Module Wiring Diagram



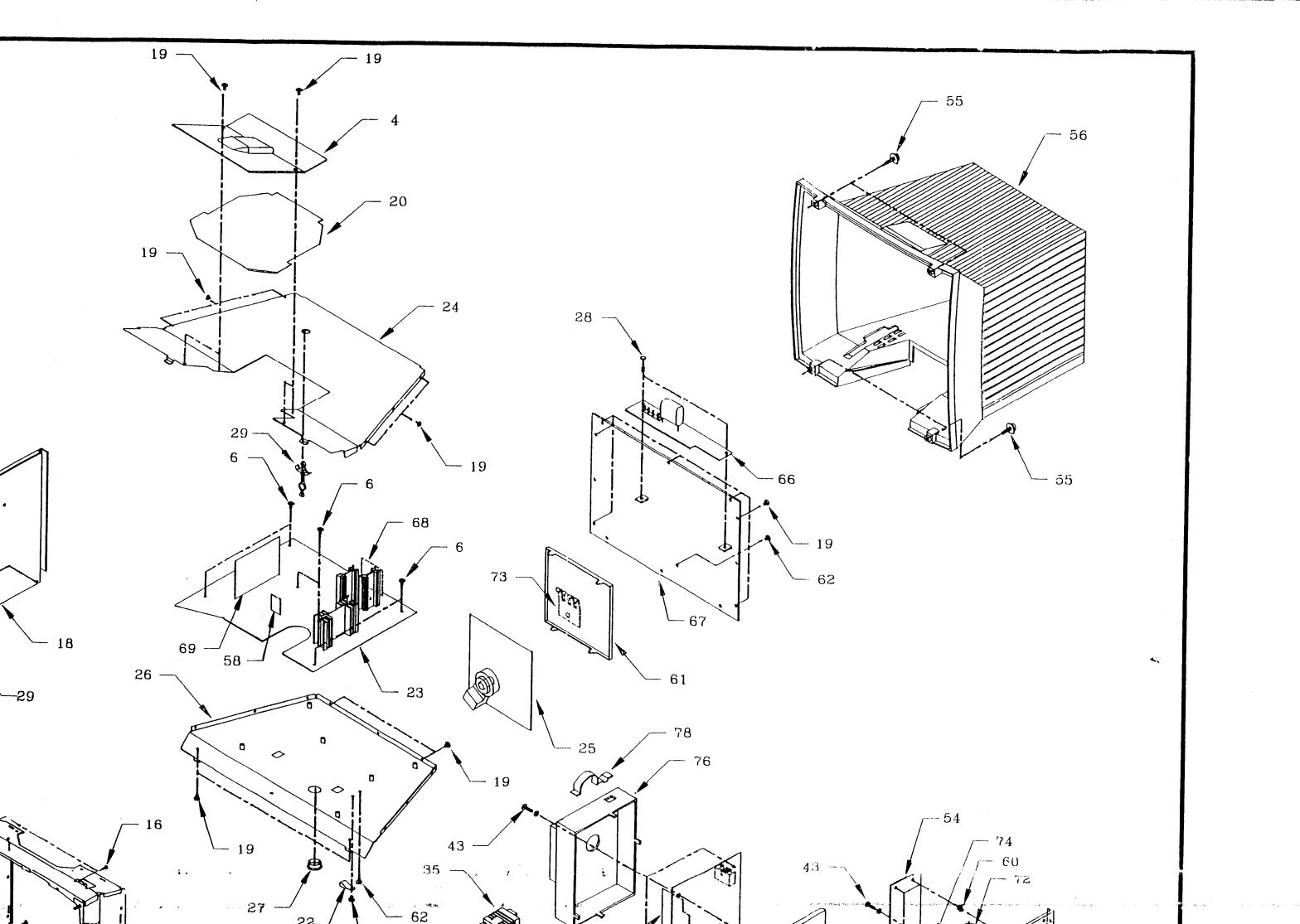


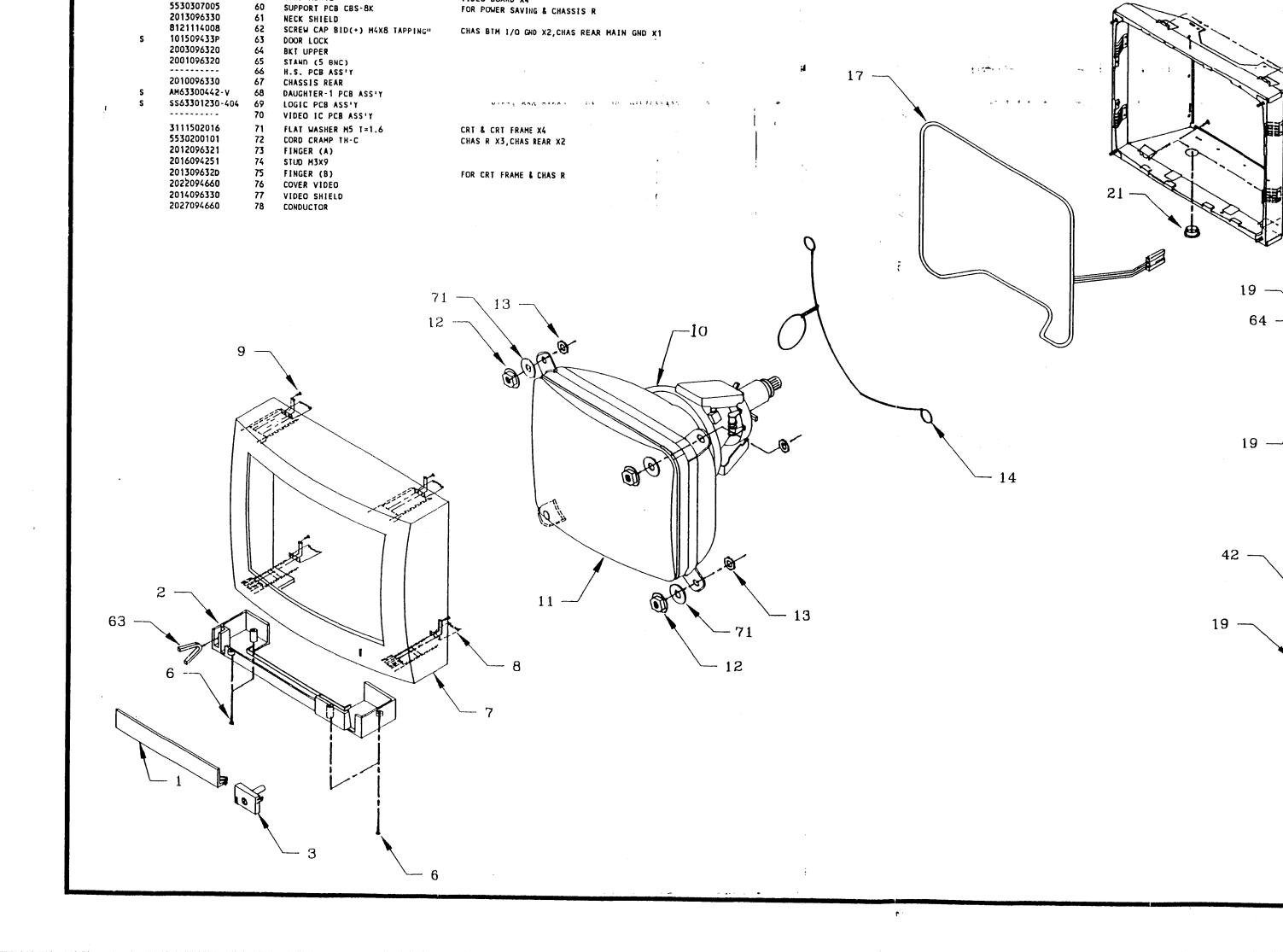
1006096330 34 SNAP BUSHINGS (NB1722) FO STAND X2 S C710633010 35 1/0 CABLE ASS'Y FOR HCS2 8002113012 37 SCREW FLATE HD(+) M3X12 FOR AC SOCKET 7061620129 38 LINE FILTER IAS-H33 FILTER 9005096339 39 DECO PLATE 9005096339 39 DECO PLATE 2004096320 40 WASHER SPRING M3 5.2eX3.2eX0.8 FOR AC SOCKET 3011100030 41 NUT ISO HEX M3 ZINC FOR AC SOCKET X2 2004096320 42 BXT LOWER 4 8504113006 43 SCREW BID(+) M3X6 MACH W/DISK FOR AC SOCKET X2 8504113006 43 SCREW BID(+) M3X6 MACH W/DISK FOR VIDEO BOARD X4, CHAS R & STUD X4, POWER SAVING X1 9010096320 44 SW INSULATOR S SS63301420-404 45 POWER SWITCH PCB ASS'Y 8037114016 46 SCREW BIND(+) M4X16 H1-LOW FOR TILT BALL & LATCH 1006094251 48 RETAINER 1035094A36 49 TILT BALL S 1010094310 50 FOOT S 1020094A36 51 BASE-2 8081111530 52 SCREW BIND/HD MACH 1/4"-20X30 S AM63300244-V 53 NECK PCB ASS'Y 8350113016 55 SCREW BIND(+) M3X16 W/S W.F.W. FOR BZL & CHAS & R.L. ASS'YX4 2002094660 57 CHASSIS (R) 5 AM67000944-V 58 H-PRO DAUGHTER PCB ASS'Y					
1000005359 4 ANCDE CAP 20000530 5 SCELU BIND(-1) R336 PACH U/D15K 200005319 7 REEL 200005310 12 REEL 200005310 13 REEL 2000	SPARE	item Number	index	Description	COMMENT
10115/04.35 3 RINGS PUBM 203909/339 4 AGGC CAP 806/113006 5 SCREW BIRD(*) M326 PACH W/DISC 81001004339 7 BETEL 81001117 3 ITLE WILL WIRE ACT AST Y 81001117 3 ITLE WILL WIRE ACT AST Y 8101117 3 ITLE WILL WIRE AST Y 8101117 3 ITLE WILL WIRE ACT AST Y 8101117 3 ITLE WILL WIRE ACT AST Y 8101117 3 ITLE WILL WIRE ACT AST Y 8101117 3 ITLE WIRE	S				
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2012096710 18 CHASSIS L 9127113006 19 SCREW PAR(*)/HD CAP TAPPING H3 19 SCREW PAR(*)/HD CAP TAPPING H3 19 SCREW PAR(*)/HD CAP TAPPING H3 10 SCREW PAR(*)		_			FOR BZL ASS'Y & CHAS ASS'Y
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19					CHAS REAR & CHAS ROTTOM Y2
FRAME & STARO X2, CRIS FRAME & CIMAS 107 108 109 109 109 10127113006 109 10127113006 109 10127113006 109 100270430 109 100270430 109 100270430 109 100270430 109 100270430 109 100270430 109 100270430 109 100270430 109 100270430 109 100270430 109 100270430 109 100270430 109 100270430 109 100270430 109 100270430 109 100270430 109 100270430 109 100270440 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 1002704000 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 1002704000 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 100270400 1002704000 1002704000 1002704000 1002704000 1002704000 1002704000 1002704000 1002704000 10027040					CHAS REAR & CHAS R X2, CHAS REAR & CHAS L X2, CRT
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STAND ASSI'X & G.CRI FARME & CLASE R X2			19		CHAS L X2, CRT FRAME & CHAS L X2, LOWER RET HODED #
B127113006		#127113nn4		CCDEU DANGANGO DAD TATTO	STAND ASS'Y X 6, CRT FRAME & CHAS R X2
9019094330 20 ANDE SHEET 10A094330 21 SAMP BUSHINGS (191722) FOR CRI FRAIR 2017094030 22 GROUND CLAMP 5 AMASSISO44-Y 23 MAIN PGR ASSIS TOP 2004594251 24 CARSSIS TOP 2024094640 26 CHASSIS (BIM) 1023094640 27 BUSHINGS (SHM) 3060040060 28 RIVET NILON 4.0x6.0 FOR PCB & CHASSIS BOTTOM X1 3010094100 31 REVUT 43 9008094A36 32 DECO SHEET (L) 9008094A36 32 DECO SHEET (L) 9007094A36 33 DECO SHEET (L) 5004096000 36 COVER 12C 800213010 35 JO CARS LASSIS (BIM) 1013094100 36 SAMP BUSHINGS (NB1722) FOR STAND X2 5701620129 38 LINE FILTER IAS-H33 FILTER 301100096330 34 SAMP BUSHINGS (NB1722) FOR CHAS LS AND X2 5701620129 38 LINE FILTER IAS-H33 FILTER 301100000 40 MASHER SPRING M3 S.2XX3.2XX0.8 FOR AC SOCKET 301110003 41 NUT ISO REW M3 ZINC 2004096320 42 BRT LOVER 4 8504130000 40 MASHER SPRING M3 S.2XX3.2XX0.8 FOR AC SOCKET X2 8002131000 40 MASHER SPRING M3 S.2XX3.2XX0.8 FOR AC SOCKET X2 800213100 50 SCERU FILTER IAS-H33 FILTER 301110003 41 NUT ISO REW M3 ZINC 2004096320 42 BRT LOVER 4 8504130064 45 SCERU BIND(+) MXNI6 HI-LOU FOR TILT BALL & LATCH 1006094251 47 LATCH 1006094251 47 LATCH 1006094251 48 RETAINER 5 1010094310 50 FOOT 5 SAMBUSHANG POR BASH'Y 5 SA					FOR BKT UPPER & STAND ASSIY
2017094030 22 GROUND CLAMP 5 AMASSIOGU-C V 23 MAIN PCR ASSI'S TOP 2004594251 24 CHASSIS TOP 2024094600 26 CHASSIS (BIH) 1023094600 27 BUSHING SNAP 3060040000 28 RIVET NYLON 4.0X6.0 FOR CHASSIS BOITOM X1 3060040000 28 RIVET NYLON 4.0X6.0 FOR CHAS EXAMP 30103094180 31 REVUT 43 9008094316 32 DECO SHEET (L) 9008094316 32 DECO SHEET (L) 50004094000 36 COVER 12C 50004094000 36 COVER 12C 80021131012 37 SCREW FLAIE HOLT) HASNI2 FOR AC SOCKET 50004094000 40 MASKER SPRING H3 S.28Y3.28X0.8 FOR AC SOCKET X 2004094320 42 BKT LOWER 4 8504113006 43 SCREW BING (NATION) HASNI H				ANODE SHEET	SIND FOR A CINS K X3, CHAS TOP & CHAS E X2
MAS3305044-V 23					
2004594251 24 CHASSIS TOP 20240946400 26 CHASSIS (BIM) 306004000 28 RIVET WYLOW 4.004.0. 306004000 28 RIVET WYLOW 4.004.0. 306004000 28 RIVET WYLOW 4.004.0. 553020102 29 CORD CRAMPER TH-A 1013094180 31 REVLT 33 908004A35 32 DECO SWEET (L) 9007094A35 33 DECO SWEET (L) 9007094A35 33 DECO SWEET (L) 9004096000 35 RIVET WYLOW 4.004.0. 5 9004096000 35 I/O CABLE ASS'Y 5 9004096000 35 I/O CABLE ASS'Y 5 9004096000 35 I/O CABLE ASS'Y 5 7001520129 38 LINE FILTER 1A5-H33 FILTER 9005096339 39 DECO PLATE 9005096330 41 NUT ISO HEX M3 21NC 200409630 43 SCREW BING M3 5.24X3.24X0.8 3011100030 41 NUT ISO HEX M3 21NC 200409630 43 SCREW BING M3 5.24X3.24X0.8 8011100630 43 SCREW BING M3 5.24X3.24X0.8 8011100630 47 POWER SWITCH PCB ASS'Y 100609620 45 SCREW BING M3 F. ARCH W/DISK 803111006 50 FOOT 100609621 46 POWER SWITCH PCB ASS'Y 80301420-404 45 POWER SWITCH PCB ASS'Y 10150094251 48 REIAINER 1035094A36 51 BASE-2 8083111530 5 SCREW BING M5 MS MS MAD WASHER SAVING PCB ASS'Y 80830113016 5 SCREW BING M5 MS MAD WASHER SAVING PCB ASS'Y 80830113016 5 SCREW BING M5 MS SCREW BING M5 MS SCREW BING M5 MS MAD WASHER SAVING PCB ASS'Y 80830113016 5 SCREW BING M5 MS	S				FOR I/O CABLE
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3060040060 28 RIVET NILON 4.0X6.0 FOR PCB & CHAS REAR 553020102 29 CORD CAMPER TH-A 5503020102 29 CORD CAMPER TH-A 5008004836 31 REVIT #3 FOR CHAS L X1 500800436 32 DECO SHEET (1) 5008006436 33 DECO SHEET (1) 5008006003 36 SAD BUSHIMOS (NB1722) FOR STAND X2 5007006000 36 COVER 12C 8002113012 37 SCREW FLATE NO(+) M3X12 FOR AC SOCKET 57061620129 38 LINE FLITER 135-133 5211100000 40 MASHER SPRING MS 5.2#X3.2#X0.8 5201100003 41 NUT ISO HEX M3 ZINC 5005006339 39 DECO PLATE 5005006339 39 DECO PLATE 5005006339 39 DECO PLATE 5005006330 41 NUT ISO HEX M3 ZINC 5005006320 42 MASHER SPRING MS 5.2#X3.2#X0.8 5011100030 41 NUT ISO HEX M3 ZINC 5005006320 43 SCREW BID(+) M3X6 MACH U/DISK 5011000404251 45 SCREW BID(+) M3X6 MACH U/DISK 50100004251 46 SCREW BID(+) M4X16 HI-LOW 50100004251 47 LAICH 50100004251 48 RETAINER 50100004251 48 RETAINER 50100004310 50 FOOT 501000044-V 54 POWER SAVING PCB ASS'Y 501000044-V 54 POWER SAVING PCB ASS'Y 501000044-V 54 POWER SAVING PCB ASS'Y 50100004310 61 NECK SHIELD 50110000330 61 NECK SHIELD 50110000					FOR CHASSIS ROTTOM V1
1013094180 31 REVIT 43 FOR CINCE TO STAND 29 O00809435 32 DECO SHEET (L) SAMP BUSHINGS (MB1722) FOR STAND X2 FOR HCS2 5 000130010 35 1/0 CABLE ASS'Y FOR HCS2 5 0001300110012 37 SCREW FLATE HO(+) M3X12 FOR AC SOCKET FOR HCS2 5 0005096339 39 DECO PLATE STORM SPINIOM MS 5.2 EXS. 3.2 EXO. 8 STAND M300000 40 MASHER SPINIOM MS 5.2 EXS. 3.2 EXO. 8 STAND M300000 40 MASHER SPINIOM MS 5.2 EXS. 3.2 EXO. 8 SOCKET FOR AC SOCKET FOR AC SOCKET POR AC SOCKET NOT AN ACT OF THE POWER SAVING X1 STAND M3011100030 41 NUT ISO HEX M3 ZINC FOR AC SOCKET X2 FOR AC SOCKET X2 POWER SAVING X1 STAND M3011100030 41 NUT ISO HEX M3 ZINC FOR AC SOCKET X2 FOR AC SOCKET X2 POWER SAVING X1 STAND M3011100030 42 SCREW BIND(+) M3X6 MACH W/DISK FOR VIDEO BOARD X4, CHAS R & STUD X4, POWER SAVING X1 STAND M3011100030 44 SW INSULATOR FOR TILT BALL & LATCH 1006094251 48 RETAILER 1015094336 49 TILT BALL STAND M3011110030 52 SCREW BIND(+) M4X16 H1-LOW 1016094310 50 FOOT 1010094310 50 FOOT 1010094310 50 FOOT 1010094310 50 SCREW BIND(+) M3X16 W/S W.F.W. FOR BZL & CHAS & R.L. ASSYYX4 STAND M3010944-V 53 MECK PCB ASSYY 2016094230 59 STUD M3X12 FOR BASING X1 FOR POWER SAVING & CHAS BIND (+) M3X16 W/S W.F.W. FOR POWER SAVING & CHAS BIN I/O GND X2, CHAS REAR MAIN GND X1 DETAIL HOLD M3010942-V 68 DAUGHTER PCB ASSYY 2106094330 64 BXT WPFER SASYY 2106094330 65 STAND (S BRC) STAN				RIVET NYLON 4.0x6.0	
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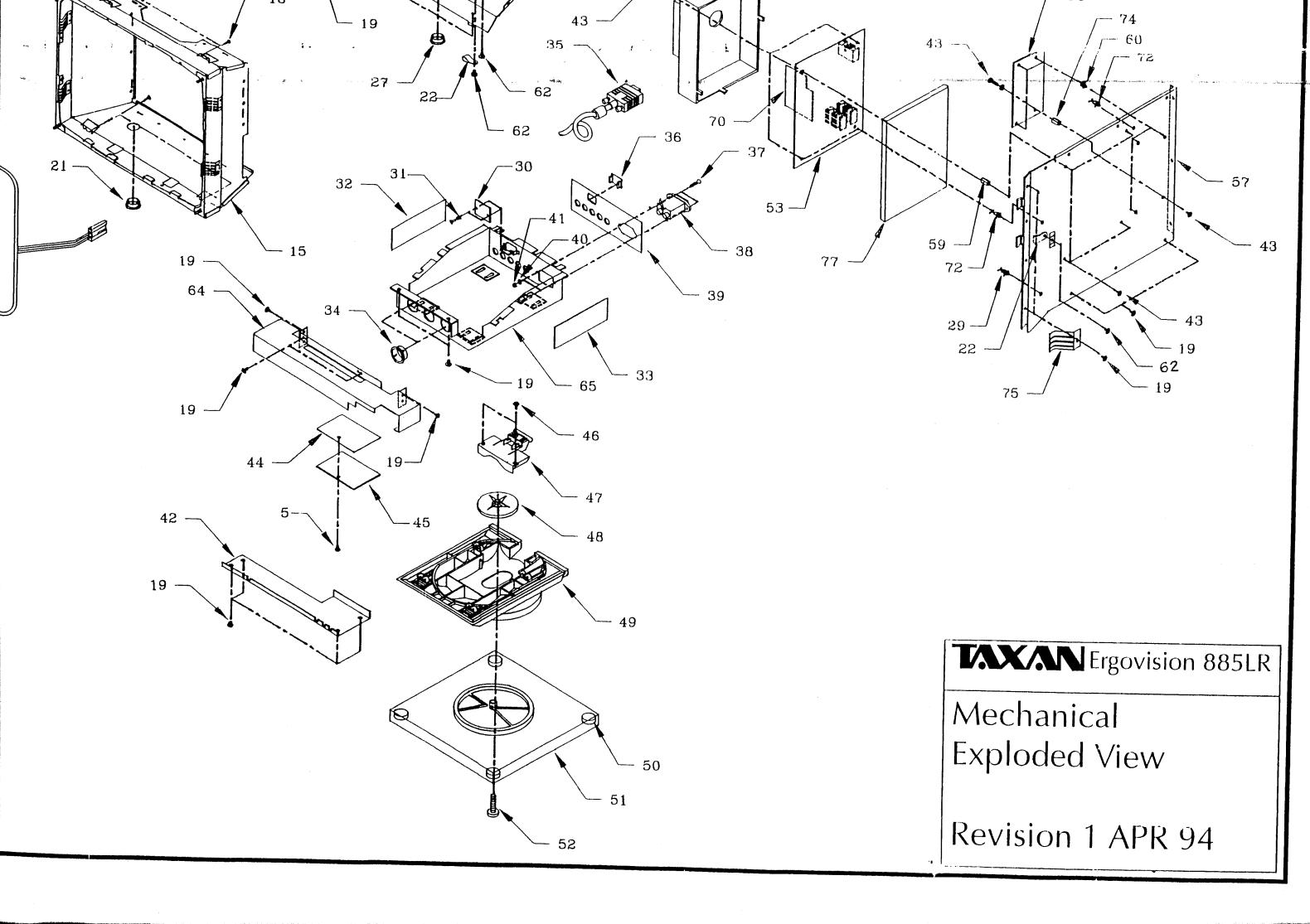


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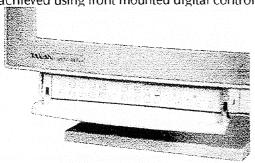


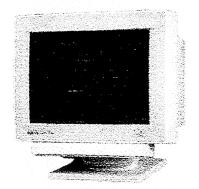


Ergovision 885 Basic Disassembly

The Ergovision 885 is a multi frequency high performance colour display with a 17inch diagonal FST 0.26mm dot pitch CRT.

Control of the picture geometry is achieved using a proprietary micro-controller with 15 factory preset signal timings. User programming of additional signal timings and all user functions is achieved using front mounted digital controls as illustrated below:





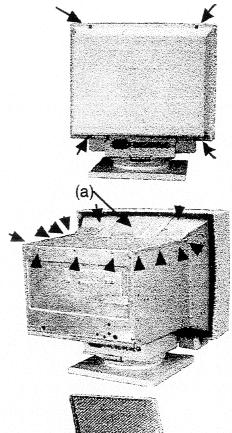
The cabinet is made up of three main plastic parts, the bezel, the rear cover and the tilt base which is detachable. The tilt base does not normally have to be removed for service access.

THE MAINS POWER LEAD SHOULD BE DISCONNECTED BEFORE ATTEMPTING TO DISASSEMBLE THE UNIT.

Removal of 4 self-binding screws (shown right) allows the removal of the rear cover and exposes the inner metal casing necessary for RFI screening.

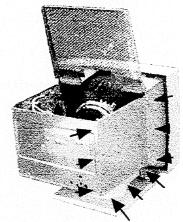
Access to the electronic assemblies begins with the removal of the CRT anode cap shield plate (a). This is held in place with 4 self-tapping screws and two lugs along the top edge. Note that the inner insulating sheet which is attached to this plate is inserted under the surrounding metalwork when the plate is eventually replaced.

The top plate is removed by removing 13 securing screws as indicated.

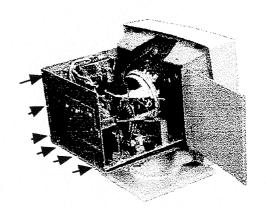


This provides access to the CRT deflection yoke and anode cap where hazardous voltages are present when the unit is powered.

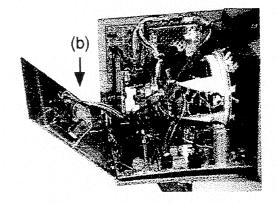
The right hand panel (viewed from behind) should be removed next by removing the 9 screws indicated. This panel is hinged along its forward edge by lugs which interloch with the CRT surround. To remove the plate once the screws have been removed, open the panel outwards and lift it gently off the lugs.

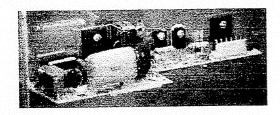


Next, the rear panel is removed by removing the six screw indicated .



One of the power pcbs (b) is mounted on the rear metal panel and the connecting cables to this pcb are only long enough for the panel to be angled to about 45° unless the cables are disconnected.





The final metal panel is difficult to remove because the video processing (c) and amplifier (d) pcbs are mounted on it and again, the length of the connecting cables restricts the movement of the panel until they are disconnected.

There are six screws to remove before the panel may be removed from the main chassis.

Access to the solder side of the main pcb assembly is only possible with the removal of the main pcb , although access to the component side is reasonably good.

